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DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE

BUREAU OF LABOR.

VOLUME IX.—1904.



WASHINGTON:
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1904.

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EDITOR,
CARROLL D. WRIGHT,
COMMISSIONER.

ASSOCIATE EDITORS,
G. W. W. HANGER,
CHAS. H. VERRILL, G. A. WEBER.

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No. 50—JANUARY, 1904.

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BULLETIN
OF THE
BUREAU OF LABOR.

No. 50.

WASHINGTON.

JANUARY, 1904.

LABOR UNIONS AND BRITISH INDUSTRY.

BY A. MAURICE LOW. (^a)

The answer to a question which is not demonstrable mathematically, which can not be solved by exact statistics or figures by which a balance can be struck, must always be colored by the sympathy or prejudice of the person whom it most nearly affects. In making an investigation of English trade unions and their effect on British industry, it must be evident that there could be no answer returned which might not be criticised, if not even attacked. That certain conditions exist to-day can be easily determined, but whether those conditions would exist if there were no trade unions, whether those conditions would be better or worse, whether improved industrial conditions would prevail, whether, in short, a hundred things would be different if certain forces were not in existence, is a speculation fruitless and unprofitable and leading to nowhere.

It must also be self-evident that a question so broad in its scope as this should not be dogmatized about. Prejudice and self-interest will sway conviction. In one sense the trade union represents a force antagonistic to the union of capital; in another the trade union is the ally of capital. Naturally, therefore, the simple question what the effect of unions of workers has been on industry will be answered in

^a The writer desires to express his thanks for the courtesy shown him and the valuable assistance rendered by Sir Alfred E. Bateman, K. C. M. G., Mr. H. Llewellyn Smith, C. B., Mr. John Burnett, of the Board of Trade, and other officials of the Board of Trade and the Home Office; Mr. Sidney Low, L. C. C., Mr. John Burns, M. P., Mr. Richard Bell, M. P., Mr. Sidney Webb, L. C. C., Sir George Livesey, Lord Glenesk, Mr. George N. Barnes, Mr. George S. Gibb, Mr. D. A. Thomas, M. P., Mr. W. Brace, and the editors of the Engineering Magazine.

more than one way, and honestly, according to the view point of capital or labor.

These divergent views, instead of leading to hopeless confusion, as might be imagined, lead very directly to a common ground where conflict of opinion can be reconciled. In spite of differences as to details, disagreement even as to principles, there is substantial accord as to the service which the trade union has rendered by substituting for the arrangement between individual employer and employee the more scientific and more satisfactory method of collective bargaining under which a trade is heard through its spokesman, and uniformity is secured in rates of wages, hours of labor, or other conditions of service with practically all employers. While the great majority of employers in Great Britain favor collective bargaining as leading to greater stability and as producing more satisfactory results, a certain number regard the power of the trade unions as inimical to their interests because the workmen, leagued in a union, are more powerful and less easily reduced to terms when it comes to a trial of strength than they were when there was no nexus to bind men of different crafts in a compact body united in a common cause, and every man, employer as well as employee, bargained as an individual.

The idea of certain economists that labor and capital are cogs in a machine, which must engage if the machinery is to do its work, the one set of teeth as important as the other and both mutually dependent, is not the general view entertained by British labor. What labor has won labor has fought for is the statement, less epigrammatically expressed, of English workmen. Their increase in wages, their decrease in hours, their better condition generally, they have fought for and the employers have conceded to them, the workman believes, because the workman as a cohesive force was powerful enough to compel compliance with his demands and not voluntarily, not because they were impelled by considerations of charity or philanthropy, not even because of the narrower view that it was more economic and therefore more profitable to them in the long run.

Yet it is this knowledge of power, this use of it—and often its misuse—which has unconsciously led to better relations between British labor and British capital, and which has exercised a marked influence on British industry. The investigation embraced an attempt to discover not only what the effect of unionism has been on industry, but also what the unions have done for their members, and what is the position of the unions and what are their relations to industry. Here one treads on no uncertain ground; the footing is firm. It can be clearly demonstrated what has been accomplished since the trade union became one of the great social factors.

It is proper to state here the method pursued in an attempt to gain an accurate comprehension of a subject so extremely complex, and so

largely colored by personal prejudice. Several weeks were spent in personal interviews with representative trade unionists and with some of the largest employers of labor. With these men the writer talked freely and at considerable length. The statement that follows is a synopsis of their views, which are given in detail later. For the present it is sufficient to draw attention to the salient facts which these interviews developed.

It is the conclusion of the clearest observers of the labor question, observers who view the problem from the standpoint of capital as well as of labor, that the labor union in England, where it was born, and where it began as a benefit and charitable society formed for the purpose of succoring its members when ill or out of work, soon became a militant society whose main object was to better the condition of its members at the expense of employers, and without regard for the rights of employers, the equities involved, or the practical question whether an employer was able to meet the demands made upon him and continue to operate his works at a fair profit. It was a period of agitation and continued unrest. The leaders were men who were trying to embitter the relations between the members of the society and the employers. They believed, most of them quite honestly, that the only way to bring about any improvement in the condition of the men in the ranks of the great army of labor, was to sow discontent and keep alive the spirit of dissatisfaction. That era has passed. The fighting trade-union leader has been succeeded in England by a leader who is no less courageous, but who is certainly more intelligent. This new leader has given time and thought to the study of industrial questions, and comprehends that if the wage worker is to improve his condition, earn good wages, and be in the receipt of steady employment, it is essential for him to maintain friendly relations with his employer, to make strikes as few and as infrequent as possible, and to do nothing foolishly to restrict the conduct of business or increase the cost of production and thereby help a foreign competitor.

The appeal to force—the strike on the one hand and the lockout on the other—is by no means an archaic weapon in England to-day, but both sides recognize the wastefulness and folly of resorting to force, and endeavor by every means possible to secure a settlement of difficulties by an appeal to reason and the employment of methods of conciliation.

It is impossible to discuss any question relating to capital and labor in England without immediately involving the United States in the discussion and without drawing parallels and comparisons between the conditions existing in the two countries. The reason for this is obvious. The United States is a factor of no mean importance in its influence on labor and industrial conditions in Great Britain. The

connection and intercourse between the two countries is now so intimate that it is no exaggeration to say that anything which affects labor as a whole in one country immediately has its reflex upon labor in the other. What impresses the observer with significant force is the comment frequently made, by employers as well as by working-men, that in the United States the unions are at the present time passing through the same stage which is part of the history of unionism in the United Kingdom a quarter of a century ago. Questions which have been settled in Great Britain are yet to be settled in the United States. Viewing the present condition of trade unionism in the United States in the light of the history of the movement in Great Britain, the men whose opinions are here presented, believe that in the United States trade unionism has not yet advanced to the high level it now occupies in Great Britain. This is one reason why, in their opinion, the relations between capital and labor in America are not so cordial as in England; and it also explains why strikes in America are more common than in England and are carried on with greater bitterness on both sides.

It must be understood that these general statements are not the personal opinion of the writer, but simply reflect the belief of men whose opinions are entitled to respectful consideration. The statements may not be correct, but they are indicative of what capitalists, as well as unionists, believe; and, in one sense at least, they are statements of fact, and not of mere opinion. In so far as they relate to the past and present history of trade unionism in Great Britain they cease to be speculative and pass into the domain of fact. The weight of evidence sustains the conclusion that the relations existing between employers and unionists are better to-day than they ever were. It is also an indisputable fact that the relations formerly were not only unfriendly but actually hostile.

Although America is the younger country, one is forced to the conclusion that the United States in recent years has exercised greater influence on English labor and English labor methods than has England on American labor.

The general tendency in America has been to adopt every possible improvement and to substitute at the earliest opportunity the new machine or tool for that less modern. The Englishman, both employer and employee, has been more conservative and more inclined to cling to that which has formerly served him. It is the constant remark of manufacturers that machines are earlier and more frequently "scrapped" in America than in England, and the same thing is said by the employee, who is inclined to believe that the American workingman is earlier "scrapped" than the British workingman, by which it means that in America the workingman is used up sooner than in England and is prematurely declared unfit for further manual labor.

But in recent years, due, doubtless, to the unbounded prosperity prevailing in the United States and the competition of American manufacturers, the Englishman has turned his attention more and more to America, and has not hesitated to profit by what he has learned there. Significant of this is the recent action of Mr. Alfred Moseley in paying the expenses of a commission of workmen to investigate industrial conditions in the United States. These men have seen things which in some respects have been a revelation to them. They have learned from the United States the use of labor-saving machinery, and it may be set down as a fact that, owing largely to the influence of the United States, they now no longer oppose the use of such machinery.

One notices also another extremely interesting fact which sharply emphasizes the difference between labor conditions in England and in the United States, and undoubtedly has its influence in both countries. More than once the remark has been made to the writer by intelligent workmen that in England the average workman is not expected to think, but is simply required to do the work for which he has been engaged, and the more he becomes merely a part of the machine committed to his care and does his work in a purely mechanical fashion the greater his chances are of retaining his position and not being interfered with by foreman or employer.

"I don't hire you to think," in the words of one intelligent observer, may be summed up as the attitude of the employer toward the workman, and men say that when they have suggested improvements, as the result of their practical knowledge and experience, they have been severely snubbed for their pains. In the United States, these same observers say, the workman is expected to think, the employer encourages it, and there is always in every factory of any importance a certain number of men who, in order to better their condition, are constantly trying to see how they can improve the methods of work.

The opposition of the union man to working with the nonunion man is less marked in England than in the United States. In nearly every case brought under the notice of the writer, union and non-union men have been found working side by side. It is not asserted that there are trades in which this opposition does not exist, but certainly among the most important of the highly organized trades the intense antipathy for the nonunionist, which is such a frequent cause of labor disputes in America, does not manifest itself so violently in England, and the "sympathetic strike" is every year falling into greater disrepute.

The evolution of the trade unions—the newer view of the relation that ought to exist between employers and employees—has led both sides to look upon harmony rather than strife as the great end to be attained. There is constantly noticed a marked increase in the desire

of both employers and men to create the machinery, in many cases reaching the dignity of a tribunal, by which, by voluntary compact, any matter in dispute, whether it be the comparatively insignificant one of a holiday or the much more vital one of a decrease or increase in wages or hours, shall be settled in an orderly method under prescribed rules, both sides loyally abiding by the decision. This method finds its most scientific illustration in those trades that are thoroughly organized and whose workers are of the highest intelligence. In trades where the degree of intelligence required is lower and where, due to this lack of intelligence and other causes, the unions are weaker, this system has not yet reached such perfection, and strikes are more frequent.

In a former bulletin of this Bureau^(a) was given a concise but complete history of the growth and status of conciliation and arbitration in various industries in Great Britain. In this article the subject will be discussed only in connection with those industries which formed the subject of the writer's investigation, and only incidentally as one of the factors of trade unionism in social development and having a great bearing on the main proposition—the effect of trade unions on British industry.

One of the most important steps taken by any association of workmen to eliminate friction, prevent labor disputes, and substitute law and order for force is the plan adopted by the Durham Miners' Association, a union of 90,000 men working in the Durham coal fields. The association has 192 branches in the county of Durham. All control of arrangements relating to wages is vested in the hands of the central committee, the subordinate branches, or lodges as they are known, having the power to make their own arrangements, subject to ratification by the central authority.

The administrative machinery of the association is worked by means of a joint committee composed of 6 colliery managers and 6 workmen, 3 of whom are elected by the lodges, the remaining members of the committee being general officers of the association. This committee deals with any local differences that may arise.

There is also a conciliation board consisting of 36 members—18 employers, 9 miners, 3 mechanics, 3 enginemen, and 3 coke workers. The board has an "independent chairman," Lord Davey, one of the lord justices of appeal, whose functions are never exercised except when the board requires him to act. In all other cases the board is presided over by one of its own members, usually an employer. On an average the board meets every three months and takes up for discussion and settlement all questions relating to wages, and such

^a Bulletin of the Department of Labor, No. 28, May, 1900: Voluntary Conciliation and Arbitration in Great Britain, by John Bruce McPherson.

matters as may generally affect the relations existing between employers and employees.

The selection of Lord Davey as the "independent chairman," a somewhat incorrect title, is such an enormous stride in what may be properly termed mutual labor legislation that it is worthy of very careful study by everyone who has the best interests of labor at heart, and who endeavors to reduce the risk of disagreements between employers and employees. The system which has been put into operation by the Durham miners is unlike that prevailing, so far as the writer has been able to ascertain, in any other trade in the United Kingdom, and it is believed that no such method exists in any other country in the world. To the Durham miners must be given the credit for having acted as pioneers and taken a long step forward, and in the interests of society, it is hoped that this system will soon be imitated by employers and employees generally.

Lord Davey is more than an "independent chairman." Practically and to all intents and purposes in deciding a case brought before him by the conciliation board of the Durham Miners' Association he sits as a justice of appeal, precisely as he sits on the bench of his own court representative of the majesty of the law and panoplied in wig and ermine; and precisely as he sits there empowered to enforce his mandate which appellant and appellee must obey, no matter whether they are satisfied or not, so his decision on any appeal brought before him by the conciliation board has all the force and effect of a mandate based on the powers conferred by statute, and from this decision there is no appeal. But let it be remembered that this mandate acquires force because in advance both sides have acquiesced in the finding, whatever it may be. In short, it is a beautiful example of all law in a highly civilized state of society depending for its enforcement upon the consent of the governed.

Regarding Lord Davey in the light of a judge of appeal, the conciliation board is an inferior court of original jurisdiction. The method of procedure, in the case of any disagreement arising between masters and men, is to submit the dispute to the board. Here it is argued and discussed in the usual way. If it should not be possible for an agreement to be reached either side may ask for a further consideration, either by a committee or by the board itself at a future hearing. In this way there is no hasty action, and any passion which may have been aroused is given ample opportunity to cool off. It may be, and it has happened, that a matter has been before the board for a year, but if after repeated hearings it becomes patent to both sides that an agreement is manifestly impossible an appeal lies to Lord Davey. Before him appear the representatives of the contending interests, who become plaintiff and defendant as they would in a case tried before a court of justice. Lord Davey listens to the fullest

argument on both sides and acts not only as judge, but also as judge-advocate; as the friend of both parties in interest it is his function, not only to bring out all the facts, but also to get at the equities involved, and in due course he renders his decision. From that decision there is no appeal; and while Lord Davey has no legal power to enforce his decision, while he has no such power as he is vested with when sitting on the bench of the appeal court, both sides regard themselves as morally bound to comply loyally with the verdict. It is significant that twice in 1895 the matter of wages was brought up on appeal from the conciliation board to Lord Davey, and on both occasions Lord Davey's decision worked a reduction of wages, a decision that was accepted by the men without further action. Quite recently Lord Davey decided that the men were entitled to the August bank holiday, the granting of which the masters had tried to resist, and although the decision went against them the masters accepted it without demur.

As showing how perfectly the system works, and how successful it has been in preventing disagreements between employers and men which might lead to serious, costly, and dangerous strikes, Mr. John Wilson, M. P., the secretary of the association, states that last year not more than £5 (\$24.33) was drawn from the strike fund, and this only in one or two minor instances of such a trivial character as hardly to be worthy of notice.

A somewhat similar system, with some modifications, governs the relations between employers and employees in the South Wales coal mines (page 41).

Among the important trades where provision is not made for the appointment of an "independent chairman" or an umpire, results almost as satisfactory have been reached by the employers who form themselves into associations and, through a committee, meet a similar committee from the men and discuss any question affecting the rights of either side. This is the practice prevailing in the textile industry (page 48) and the engineering trade (page 22).

The foregoing shows in a measure how trade unionism has affected industry, but it may be properly termed the sociological side and not the economic, although anything that has a tendency to produce harmony between employers and employees, and especially to prevent or diminish strikes or other interferences with the steady output of mill or mine, must have a marked influence upon economic results. Taking up for consideration the vexed question whether the English trade union has exercised a malign influence in obstructing the use of labor-saving machinery or a more improved type of machinery, or whether it has by arbitrary and tyrannous rules and regulations hampered the employer in the conduct of his business or prevented a factory from being worked to its highest capacity, thereby decreasing

output and increasing cost—which is the strictly economic phase of the inquiry—one finds a more marked divergence of opinion than in any other line of investigation, and the reason for this can be quickly comprehended.

Trade unionists do not disguise the fact that the object of the union is to better the condition of the great body of wage workers, and they are firmly convinced that the improved conditions of to-day, which are in such marked contrast to conditions half a century ago, have been brought about principally through trade-union agitation and the struggle which organized labor has carried on for shorter hours, better sanitary surroundings, greater safeguards to life and limb, and a larger share of the profits of capital. Labor representatives unite in saying that labor has no objection to the employment of labor-saving machinery or the use of any method by which output may be increased and the cost of production decreased, provided that whenever it is possible by the use of improvements to increase the profits of capital some portion of that increase should be shared by labor. The defense of the workman always is that he must for his own self-protection take measures to prevent himself from being “exploited” by the unscrupulous employer, who, but for the power of the union, would take advantage of his needs and degrade the class to which he belongs.

On the other hand, the charge was made by more than one employer that the influence of unionism had been decidedly injurious to British industry, in that the unions, because of their unintelligent grasp of affairs, had become possessed of the perverted idea that if they could prevent the use of machinery employment would be found for a larger number of men, which would be for the advantage of the body of workmen as a whole; and by the same reasoning if they could prevent men from working to their fullest capacity it would necessitate the employment of additional men, and the more men employed the better off all would be. It was not easy, however, to obtain specific instances of what is known as “ca’ canny.” Sir George Livesey, the chairman of the South Metropolitan Gas Works, cites it (page 37), so does Major Vane Stowe (page 46) and Mr. Brett (page 54). To offset this we have the testimony of Mr. Arnold F. Hills (page 29), Mr. Gibb (page 62), and others.

Here again the conflict of opinion may lead to a middle ground which will once more enable a satisfactory and just conclusion to be reached. That in the past the trade-unionists as a class opposed with all their strength the introduction of labor-saving machinery, fought improvement in every form, and penalized the more efficient workman to the extent that it was impossible for him to profit by his superior natural advantages, higher skill, or greater industry, can not be controverted, and is reluctantly admitted by the most intelligent among the labor

leaders. Nor has this policy been entirely abandoned even to-day, but it exists in a less vicious form in unions embracing the more highly specialized trades and finds its greatest exponent where the general intelligence is lower. Thus the engineers, perhaps the most highly skilled labor in Great Britain, did at one time oppose the introduction of improved labor-saving machinery, and sanctioned, if they did not actually approve, "ca' canny," but to-day they make no objection to the use of any machine, provided they are not "exploited" by its introduction; and their official organ, the Amalgamated Engineers' Monthly Journal, has denounced "ca' cannyism" with as much vigor as would the organ of capital.

Referring again to the sociological side of trade unionism, there is substantial agreement that the unions have tended to elevate the status of the workman and have exercised upon him a sobering influence, in that there has been an endeavor to impress upon the members a sense of their responsibilities and a knowledge that any action taken by an individual workman which would lead to a dispute between that workman and his employer might fall on the whole body of workmen and cause them great injury.

The more important unions in England are strong financially and have large sums in their treasuries, some of them having real property, cash, and other live assets exceeding \$1,500,000. These funds are the sinews of war of the trade-unionist, and are used to support men who are out of work because of a strike or lockout, to pay sick or accident benefits, and in many of the unions to provide pensions when their members reach a certain age or have been subscribing members of the fund for a prescribed period. The members of these large unions are therefore in a sense capitalists, and they become possessed of the conservatism which is the inherent virtue of capital. They are ready to strike and to use their funds for the support of their striking brethren if a principle must be defended, but they are not reckless in money matters, and a full treasury, instead of being a standing menace to peace, has in practice proved one of its strongest safeguards. A further restraining influence has been the decision of the House of Lords in the Taff Vale case. A short history of this most important judicial decision as affecting the rights of labor will be found on pages 77-92 of this Bulletin.

Labor in England has always been the subject of special statutory enactment. In the old days these enactments often pressed with severe and repressive force on the worker; at the present time his rights are jealously guarded and he is accorded certain privileges which belong exclusively to him. Thus the trade unions acquire their legal existence by virtue of two acts of Parliament applicable only to them, which accord to such associations of workingmen certain distinct privileges possessed by no other association, whether formed to earn

money, to pursue scientific research, or merely for social companionship. A belief that the legislature intended to grant even greater privileges than in the opinion of the courts was the intention of the lawmaking power led to the unions exceeding their supposed legal rights and resulted in the Taff Vale decision. Parallel also are the employer's liability act, the workman's compensation act, the conspiracy and protection of property act, and the conciliation act, all special legislation in the interest of labor. Labor unionists claim that this legislation is due to their efforts, their agitation, and the influence which they have exercised on public opinion; employers challenge this assertion and contend that labor has simply shared in the general progress which the world has made.

What, however, is not open to discussion is the self-evident fact that such schemes as Mr. Arnold F. Hill's premium system (pages 25-28) and Sir George Livesey's profit-sharing plan (pages 33-37) are the direct results of trade unionism. Both the premium system and the profit-sharing plan are not unknown in the United States, but the profit-sharing system in force at the South Metropolitan Gas Works has features so unlike that of any similar scheme in this country that it has appeared to the writer worthy of being explained in detail. Sir George Livesey believes that it is the solution of what is commonly called "the labor problem;" that it not only insures perfect harmony between employer and employee, with the most satisfactory economical results, but also is to be approved because it is the only ethical relation that ought to exist between labor and capital. English employers are deeply interested in Sir George Livesey's methods. Some have not yet been converted to his doctrine. Others assert that the plan would not apply to the ordinary commercial undertaking, though it can be made to work successfully in the manufacture of gas, where the price of the product is determined by statute and the return of capital bears a fixed relation to the cost to the consumer, and perhaps in other public utilities owning monopolistic rights by the grant of municipal or other franchises, where price and dividends are narrowly limited by statute or ordinance. But Sir George Livesey who has devoted many years to a careful study of the labor problem and who is a sociologist as well as a keen man of business, does not share this view. He holds that by adjusting circumstances to conditions what has been done at the South Metropolitan Gas Works can be done, broadly speaking, everywhere with the same happy result that has followed in the great manufacturing concern of which he is the head.

Having explained the object sought to be obtained by the present inquiry, the methods pursued, and the salient features developed, there are now presented the views of representatives of capital and labor.

Mr. John Wilson, member of Parliament for Mid-Durham, is the

secretary of the Durham Miners' Association. Mr. Wilson is a practical miner, having worked in the pits both in England and the United States; in the latter country on the Monongahela and also in Illinois.

Thirty-three years ago the union was formed, and looking back over those thirty-three years and comparing the condition of the miners then with what it is to-day Mr. Wilson finds that it has immeasurably improved, and that improvement he ascribes almost entirely, if not solely, to the union. In the days when the union first came into existence the miner worked from ten to eleven hours per day; to-day his actual hours of labor are six and three-quarters. Not only has he gained the great boon of a shorter workday, but he has had his wages increased, and both have followed from the agitation carried on by the union and, if agitation was not successful, then by striking. Some of the trades of England are endeavoring to obtain an eight-hour day by statutory enactment, but the miners, Mr. Wilson says, are opposed to the eight-hour law because they are now better off without it, and instead of profiting by legislation that constituted eight hours a legal day's labor they would lose by it.

But, Mr. Wilson asserts, not only has the union improved the condition of the men, but it has, *pari passu*, helped the employers by steadying the trade and creating a fixed set of rules, by raising the standard of the men, by making them more intelligent, and by imposing upon them a due sense of their responsibility and the obligations which rest upon them no less than upon their employers.

The charge so often brought against the unionist that he has been a detriment rather than an advantage, both to labor and to capital, because he has imposed foolish and unwarranted restrictions on output, the conduct of business, and the use of newer and more scientific methods and appliances, is emphatically denied by Mr. Wilson. He says the unionist, or speaking specifically his own union, has not in any way tried to interfere with the management of the business; and in regard to the use of labor-saving machinery the miners have never objected to its use, provided the employers did not gain all the benefit from its introduction. The employers are at liberty to do what they please so long as they remember that labor has a right to expect a share in whatever is contributed to the increased wealth of capital.

In referring to the Mine Workers' Association of America, Mr. Wilson stated that it was his belief, as a practical miner who has had experience in the United States, that the union tries to cover too much ground and endeavors to control too wide a territory, and that if the American miners would pattern after their English coworkers and have smaller and more compact organizations, such as the Durham Miners' Association, the result would be much more satisfactory. He also pointed out that if some method could be devised by which

employers and employees could be brought into more familiar and frequent contact, such as exists in his union, disagreements as they arise from time to time would be much easier of solution.

The Amalgamated Society of Engineers is the largest and in some respects the most important and influential trade union in the United Kingdom. Its last report showed a membership of 95,000, of whom 53,259 were fitters and 25,522 were turners (called machinists in the United States), 5,467 were blacksmiths, and the remainder were men (mostly pattern makers) who worked in various other branches of the trade, and stationary and marine engineers.

The society erected and owns a fine building in Peckham, London, worth £12,500 (\$60,831), which is used solely for the general offices of the society and the residence of the general secretary, who is paid £4 10s. (\$21.90) a week, with free rent, coal, and gas.

Any man who has served five years at his trade and is recommended by two members in good standing as a capable mechanic, and is in receipt of the standard rate of wages in his district, is eligible to membership. It should be noted here that the hours of labor and the rate of wages are not uniform in the trade in all parts of the Kingdom, but vary according to local and other conditions, and are determined in each district by the local branch of the society. The moral qualifications of applicants for membership are supposed to be inquired into before admission, but it is admitted that they are not closely scrutinized; on the other hand members who are considered undesirable, or who for any cause have been guilty of conduct which makes them objectionable or tends to cast discredit upon the society, are expelled. The result has been that the standard of membership is being continually raised, as members are reluctant to stand sponsor for men whose characters may cause their expulsion. Any man who has received six months' sick or "donation" benefit—the latter paid when a member is out of work—must fully satisfy the society that there are good reasons for his receiving relief. It is assumed that a man who is unable to find work for six months, or who is sick for that length of time, is responsible for his condition and is of little value to himself or his fellow-craftsmen. The burden of proof is placed upon him to prove the contrary.

Mr. George N. Barnes, the general secretary of the society, said to the writer:

That the unions have increased production, I think, can be quite clearly demonstrated. By insisting on high wages they have given a stimulus to employers to substitute modern instead of the former lackadaisical methods, and sometimes in cooperation with employers' associations have been the means of the use by employers of machinery. Let me explain this and make myself understood so that there will be no wrong impression created. It is quite true that up to a few years

ago, say ten years ago, some unionists sought to prevent and hamper the introduction of machinery, but since then the matter has been thrashed out and has been settled because the men have seen that they can not oppose progress and it is useless for them to think that they can stand in the way of the use of machinery. The rank and file against the advice of their leaders, opposed machinery. Trade-union leaders in modern times have not done so, and to-day it is only an extraordinarily stupid man who thinks he can prevent the adoption of the latest and most improved forms of labor-saving machinery. Furthermore, what some leaders now insist on is not only that there shall be no opposition to the use of machinery, but that men shall use their machinery to the best advantage. Remember, of course, that while I talk in a general and broad way about unionism, I am referring more especially to my own trade and my own society.

I said a few minutes ago that the unions have given a stimulus to the employers and forced them to the use of better methods and more advanced manufacturing processes. The reason for this you can readily understand. The unions have been the means of obtaining for their members better wages and shorter hours, and it follows as a matter of course that the employer, to compensate himself for the increased cost of labor, has been forced to obtain from labor the highest return for his productive energy. He could not do this by sweating his men or making them work excessively long hours, because the union would not permit that, and therefore he had to seek his compensation by increasing the productive output of his factory by the use of the latest and most approved machinery. You will find in all unorganized trades the use of not only crude methods but antiquated processes of manufacture. It is noticeable that in the most highly organized trades in this country—that is to say, the most highly organized on both sides both on the part of the employer and the employees—the cotton spinning industry, only the best machinery is to be found, and the most advanced methods prevail.

It has often been asserted that the unions are extremely selfish and tyrannical; that they are stupidly insistent upon what is termed the rights of the workingman without giving any thought or consideration to what are clearly the rights of the employer. Now, to be perfectly frank and honest, it may be admitted that a certain part of this charge is true. There have been instances when the men have sought to obtain an advantage, when they have even attempted to interfere with the conduct of the business, when they have objected to the use of certain machinery, and to that extent they have retarded and interfered with the proper conduct of business. But everyone knows the reasons. In the industrial field labor and capital were in conflict, and worked as opposing forces instead of a united force for a common end. I am not defending labor, or making any excuses or apologies for what I think requires neither excuse nor apology from me. I am merely stating facts, and it is largely owing to the influence of unionism and to its having provided a bridge to connect the two sides that much of this friction has disappeared and the relations between employers and men are so much better than they were in the past. Formerly there was an impassable gulf; to-day one may say, speaking with due moderation, that although that gulf is there it is not nearly so wide nor so deep as in former days, and the means of crossing it are now so easy and so many that it no longer offers the obstacle which it did in a time even so close to the present as ten or fifteen years ago.

Now, just a word as to the charge of selfishness. I do not think because men are members of a trade union that they are any more selfish or any different from men outside a union or from men generally. They have the same vices and the same virtues, the same defects and the same good qualities. They are looking out for their own interests, trying to get the most out of life, and trying to make life as easy as possible for themselves as a whole; and yet it should not be overlooked that the cardinal principle of trade unionism is that an injury to one is an injury to all, and that anything that is supposed to be a benefit to one is really not a benefit unless it is a benefit to labor as a whole. For instance, although repeated efforts have been made to unionize women, it has always been a rank failure, the reasons for which it is not necessary that I should enter into here; yet, indirectly, the position of women has been greatly advanced because of the continual agitation on the part of trade unionism, as a whole, for the passage of better and more humane factory acts, and that agitation has resulted in most important reforms. Our society, for instance, has no direct concern in laws affecting the employment of women and children, because, as you are aware, women and children are not employed in our trade, yet we have always taken our full share in trying to ameliorate the condition of female labor, because we recognize that it is for the advantage of all to improve their condition, and it is a matter of such vital concern to us that we can not selfishly ignore wrongs that we know to exist. As one concrete instance of this I call your attention to the fact that last year an act of Parliament was passed decreasing the hours of labor in textile factories one hour a week, and I unhesitatingly say that this boon to women and children is largely due to the efforts of the trade unions.

Another great reform must assuredly be placed to the credit of unionism. In the old days what was known as the "truck" system largely existed, which was one of the most formidable obstacles to the workingman improving his condition. Men were not paid their full wages in money, but were paid in store orders, and for everything they obtained at the company's store they were charged exorbitant prices, with the result that often at the end of the month not only they did not receive any money for their month's labor, but they were frequently found in debt to their employer. Under this system they were virtually reduced to a condition of slavery, and were tied to their place of employment because, being in debt, they were unable to leave until their indebtedness was liquidated, and they did not have even a shilling to take them to another place or to support them while they were looking for work. The "truck" system has now been abolished, weekly payments are now almost invariably the rule, and every man is paid directly by his employer instead of through a foreman or some other agency, so that there is no chance of a "rake off," as you say in America. Also the contract system, what you know as sweating, now exists only in unorganized trades and home industries. All these reforms have been largely brought about through trade unionism.

Now, to answer the charge so frequently made that we impose restrictions upon employers and insist upon regulations which hamper production. It is quite true that we do impose restrictions to protect the men so as to protect their health and efficiency, which tend to improve their general welfare and elevate their condition, but we regard these things as of more importance than an enormous production accomplished only at the expense of physical deterioration and

the degradation instead of the uplifting of the great body of wage workers. Not only do we regard it as vitally essential to protect the great body of workingmen against the cupidity and in some cases the inhumanity of their employers, who are always more competent to safeguard their own interests than are their men, but also do we deem it essential to protect the great body of workingmen from the unscrupulousness and superior strength of the individual worker, because while the individual may profit from the possession of certain physical or other powers, he can do so only at the expense of the great body of his fellow-workers. To that extent the charge that we impose restrictions is a charge which I am perfectly willing to admit, but it is done in the interest of the men, and is for the advantage of the community; in the long run it is for the good of employers as well as the good of the employees; it is not for the benefit of any one particular trade or industry or any small class of men, but for the people of England as a whole. In some of our districts the men will not under any circumstances work on Sunday. Some employers object to this, and regard it as a vexatious and annoying regulation which causes them great inconvenience when repair work has to be done in a hurry. Quite so, from the standpoint of the employer, but from our standpoint, if the men of the district, either from conscientious or economic reasons, object to work on Sunday, is it not perfectly fair and proper that they should not be compelled to work on Sunday, but should have that day to themselves for rest and reasonable recreation? In some of the districts there is no prohibition against Sunday work, but it must be paid for as double time; in other districts the men will not work overtime more than two whole nights in the week, and then it must be paid for at the rate of time and a half. All these regulations are made, not in the interest of the exceptional individual or to embarrass or harm the employer, but simply because we believe they are for the greatest good of the greatest number.

So far as we are concerned we do not limit the number of apprentices, and instead of being opposed to the apprenticeship system we are, on the contrary, strongly in favor of it. We regard it as a good thing, because the system maintains the general level of skill and keeps the trade up to a high standard. In America we have noticed that your trades are recruited not from the apprentices who have acquired their trade by careful training, but from the handy man, who picks up rather than carefully learns his business. The result, I believe, is not for the advantage of American industry. We notice that in the American factories a large number of the foremen are either English or Germans or Scandinavians, and we attribute that to the fact that the foreigner who has served his time as an apprentice has a better all-round training than the American, who is very apt to be specialized in a particular branch of the trade.

In one respect at least we are much more liberal in this country than are the workmen in America. American unionists object to work with British union men or with nonunion men; here we make no objection to union and nonunion engineers, or to British and American union men being fellow-workers, provided wages do not suffer in consequence, and all are competent, and consequently good work is done. Of course, we believe that all men in our trade should be members of the union, because we think it for their advantage, but if men are so foolish to their own interest to remain outside of the union, that is their affair, and while we may regret it we are not going to deprive

them of their means of earning a livelihood because they are not sensible enough to see what is for their own advantage. Moreover, if American engineers—or machinists, as they are termed in America—come here we welcome them, but if our members go to the other side they are molested by the American unionists, who are just now somewhat narrow in this respect. However, this will, I believe, pass away as we get to know one another better.

The unions have conferred two benefits on the workingman. They have increased his wages and reduced his hours—the increase of wages being fixed by unionism and custom. Broadly speaking, that is the most important thing they have done for labor, and they have accomplished that by having been able to negotiate with employers, which was impossible so long as the men were unorganized, and it was only possible when they became a cohesive force and were able to be represented by delegates who spoke for them as a unit, and also because the men, through their unions, were able to have trained men to represent them, which placed them more on an equality with their employers.

Indirectly the unions have been an educational force in the country. It is impossible for men constantly to meet and discuss economic, political, and social questions without profiting by this interchange of thought, without their horizon widening; and these discussions, and the contact of man and man, are having a distinct educational value. More and more unionists are taking part in political affairs.

Mr. Barnes was asked if in his opinion the unions have done anything to lessen intemperance, to which he replied:

Certainly not directly. Unfortunately the meetings of our local societies are generally held in public houses (saloons), except in Scotland, where not a single district meets in a public house, and meeting in a place of this kind is apt to throw temptation in the way of our members. Of course there are many men who go to meetings and who do not drink, who never touch anything, but still it is a dangerous thing to gather in public houses. Nothing will decrease intemperance, in my opinion, except to improve the workman's general condition, and give him a larger outlook. When the union requires that a man to be a member shall be a man of good character, when it makes him pay the penalty of his folly or disobedience by refusing to associate with him if he fails to conform to proper regulations, it has done something to raise the standard.

The unions have encouraged better work. Through our journals we constantly impress on unionists the necessity for their taking an interest in their work, to do the best work possible, and to show up shoddy work.

But perhaps one of the chief reasons why unionism should command the hearty support of everyone is that it has improved relations between employers and their men. It has undoubtedly been the means of decreasing the number of strikes. Strikes are now regarded as the last resort, when all other means of settling differences have failed, and it is a fact that no persons are more opposed to strikes than the chief officials of unions. That is why union officials endeavor by every means in their power to avoid a strike, and reluctantly sanction it only when it is the last alternative, when a great principle is involved which justifies men in fighting; just as nations fight when not to fight would be to sacrifice national honor.

So far as this society is concerned, we have adopted measures which afford every opportunity for discussion and the bringing together of both sides before there is a stoppage of work. The society is divided into branches of not more than 300 members each, each branch electing its own officers and managing its local affairs, subject, of course, to the control and direction of the general governing body of the society. Branches are grouped into districts represented by a district committee, who have power, subject to the approval of the executive council, to deal with and regulate the rate of wages, hours of labor, terms of overtime, piecework, and general conditions affecting the interests of the trade in their respective districts. In case of a dispute the matter is discussed between the district committee and the local association of employers, usually through a small subcommittee, and if no agreement can be reached by them, the question is referred to the executive council of the society and the executive of the employers' federation. These two executive bodies meet as a rule once every three months and take up all the business which has accumulated in the interim, and generally they are able to reach an agreement, usually in nine cases out of ten.

In case of shop disputes the district committee has power, with the consent of the executive council, to take a vote of the members of the district upon the advisability of assisting the strike committee in the district by a local levy; but that levy must not exceed 6d. [12 cents] weekly during the continuation of the dispute. In the case of a shop dispute the members are not permitted to leave their employment without having first obtained the approval of the district committee. In such cases the rules provide that where any sections of the society can with advantage be exempt from being drawn out, their special cases shall be investigated with a view to the best interests of the society being conserved. No general strike shall be entered upon in any district affecting the whole of the members unless carried by a majority of three votes to two of the members voting of that district, and no settlement shall be decided upon unless accepted by a similar majority. The vote must be taken by ballot.

On the application of any district committee, where a dispute is existing, the executive council may apportion a sum from the general strike levy, which the council has the power to order, not to exceed 6d. [12 cents] per member per week, but which shall not be in force for more than one month without a vote being taken as to its continuance for the same period. No levies shall be enforced unless by the consent of the majority of the members voting, nor shall any levy continue in force longer than three months without a second vote being taken, and none of the money may be applied to the relief of men who are not members of the society.

In support of his assertions regarding the unionist view of the relations between employers and men, Mr. Barnes called attention to an article which he wrote for the *Engineering Magazine*, January, 1901, and also an article from his pen in the *Amalgamated Engineers' Journal*, the official organ of the society, January, 1901.

In the *Engineering Magazine* Mr. Barnes said:

The new unionism is frequently held up to opprobrium, as the disturber of the peace in questions of demarcation of work and kindred

troubles. The exact opposite is the fact. The new unionism seeks to prevent labor organizations being pitted against each other. Its leaders have actively opposed the fomenting of squabbles between rival trades. If at any time it has backed up the old unionism against an incursion of unskilled labor into a trade, it has not done so for the purpose of seeking privileges for one section at the expense of other sections of labor, but because convinced that such incursion would lead to overspecialization with attendant evils. It accepts specialization as inevitable, but desires to regulate the application of the newer methods arising therefrom, so as to make them harmonize with wider interests than those arising from mere considerations of production.

Again, the new unionism is often charged with restricting production, so as to spread work and employment over a larger number of men. This may have been at one time and for the reason stated, and it should not excite surprise if workmen had thus interpreted the theories once current as to the sources of wealth and wages. Trade-union organization has certainly been used at times to cover up malingering, but this by no means implies that trade unionism is responsible for a disposition, common to human nature, to rub along through life as comfortably as possible. It is no part of trade unionism, either old or new, to restrain production below a point consistent with the requirements of health and permanent efficiency; and the new trade-unionist, at all events, knows full well that the larger his production the larger, other things being equal, will be his wages; but, while believing in a fair day's work, the trade-unionist declines to be entirely guided by short-sighted views of production. He bases his case upon the broad basis of humanity, refusing to regard himself or his fellows as mere wealth-producing machines. Trade-unionists, both old and new, claim for workmen a voice in the fixing of the general conditions under which they shall work. Both are alike interested in protecting workmen from the admitted evils of piecework, from overspecialization of industry, from long hours of labor, and from low wages. If there is any difference between them on these points, it can be summed up in the different importance which each may assign to them.

In the journal of his society Mr. Barnes thus addressed his fellow-members:

Trade unions are being made the object of bitter attacks by certain organs of public opinion, and are being held up as the scapegoats responsible for the relatively better position now occupied by America and other countries, as compared with formerly, in the race for industrial supremacy. Trade-union leaders, it is being said, advocate restriction of output, so as to spread work and wages over a large number of workers.

These statements really emanate from certain rat employers, who from time to time are induced to unburden themselves in regard to the shortcomings of the British workman in general and the trade-unionist in particular. Now, it may be fairly claimed that these pages afford, at least, pretty good evidence as to the lead given as far as the Amalgamated Society of Engineers is concerned, and we might challenge our traducers to produce anything from them at any time which would bear out the accusations made. There has been much, on the contrary, to show that we are favorable to the rendering of a fair day's

work for a fair day's pay, and we believe that trade-unionist leaders generally have long outgrown the fallacy of a work fund or a wages fund. We believe that, speaking generally, wages increase with increased product, and that therefore it is to the interest of the workman, within certain limits, to do his best. Those limits are: Due regard (1) to his own health and permanent efficiency, and (2) to the condition necessary to foster and maintain a fellow-feeling among workmen.

Overtime, for instance, we believe to be injurious and a bar to education, therefore we oppose it; and we also oppose unregulated piece-work, because we know that thereby those who are physically strong and morally unscrupulous are used by some employers to set impossible tasks for the average man.

In a word, trade unionism exists—not to act as the bell horses to make up for capitalistic muddle or educational deficiency, nor to crucify labor for the purpose of retaining trade in any one country as against another—but for the purpose of securing such conditions as will conduce to the health, education, comfort, and permanent efficiency of labor.

But we are not averse to the greatest possible production, or to the adoption of any method of securing it, so long as the principle of mutuality is maintained and the standard rate of wages safeguarded.

Within those limits we have no right and no desire to restrain any man, and we know that trade-union leaders take, as a matter of fact, a far more enlightened view in these matters than is taken by the average workman.

Having stated our position, then, in general terms, we venture to add a few words on the subject which has recently exercised the minds of our journalistic critics. We believe that the competition of America can be met only by better workshop equipment and more thorough education. The first is a matter entirely for the employers, but the question of education is one in which the society might finally take some part. * * * It occurs to our mind that the jubilee of the society might be fittingly celebrated by some scheme being inaugurated whereby young members or the sons of members could take part; but it must be on a wide basis. Education does not in our judgment consist only in training men to be producing machines, but should aim at making men think and inducing them to take an intelligent interest in affairs.

On July 13, 1897, as the culmination of a long series of disputes between the engineers and their employers, and a specific demand for an eight-hour day, a strike, or—as the men contend—a lockout followed. The dispute lasted from July 13, 1897, until January 31, 1898, when work was resumed without the concession of the eight-hour day having been won; 27,000 men were involved; the funds of the Amalgamated Society of Engineers were depleted by £207,140 (\$1,008,047); other trade unions contributed £69,457 0s. 1½d. (\$338,012.52); the contributions from abroad amounted to £28,399 7s. 5d. (\$138,205.54), and from the general public and other miscellaneous sources there were received £18,023 10s. 1½d. (\$87,711.39).

The loss to the employers and the damage done to the British engineering trade can never be known, but it was enormous, and the

strike or lockout is one of the most important in British industrial history.

As a result of the strike, employers and employees adopted the following agreement, which is now in existence and governs the conditions of the trade:

**GENERAL PRINCIPLE AGREED TO OF FREEDOM TO EMPLOYERS IN THE
MANAGEMENT OF THEIR WORKS.**

The federated employers, while disavowing any intention of interfering with the proper functions of trade unions, will admit no interference with the management of their business, and reserve to themselves the right to introduce into any federated workshop, at the option of the employer concerned, any condition of labor under which any members of the trade unions here represented were working at the commencement of the dispute in any of the workshops of the federated employers; but in the event of any trade union desiring to raise any question arising therefrom, a meeting can be arranged by application to the secretary of the employers' local association to discuss the matter.

Nothing in the foregoing shall be construed as applying to the normal hours of work, or to the general rises and falls of wages, or to rates or remuneration.

ILLUSTRATION OF THE ABOVE GENERAL PRINCIPLE.

Freedom of employment.

Every workman shall be free to belong to a trade union or not, as he may think fit.

Every employer shall be free to employ any man, whether he belong or not to a trade union.

Every workman who elects to work in a federated workshop shall work peaceably and harmoniously with all fellow-employees, whether he or they belong to a trade union or not. He shall also be free to leave such employment, but no collective action shall be taken until the matter has been dealt with under the provisions for avoiding disputes.

The federation do not advise their members to object to union workmen or to give preference to nonunion workmen.

PIECEWORK.

The right to work piecework, at present exercised by many of the federated employers, shall be extended to all members of the federation and to all their union workmen.

The prices to be paid for piecework shall be fixed by mutual arrangement between the employer and the workman or workmen who perform the work.

The federation will not countenance any piecework conditions which will not allow a workman of average efficiency to earn at least the wages at which he is rated.

The federation recommend that all wages and balances shall be paid through the office.

RATING OF WORKMEN.

Employers shall be free to employ workmen at rates of wages mutually satisfactory. They do not object to the unions or any other body of workmen, in their collective capacity, arranging amongst themselves rates of wages at which they will accept work, but while admitting this position they decline to enforce a rule of any society or an agreement between any society and its members.

The unions will not interfere in any way with the wages of workmen outside their own unions.

General alterations in the rates of wages in any district or districts will be negotiated between the employers' local association and the local representatives of the trade unions or other bodies of workmen concerned.

APPRENTICES.

There shall be no limitation of the number of apprentices.

PROVISIONS FOR AVOIDING DISPUTES.

With a view to avoid disputes in the future, deputations of workmen will be received by their employers, or by appointment, for mutual discussion of questions in the settlement of which both parties are directly concerned. In case of disagreement the local associations of employers will negotiate with the local officials of the trade unions.

In the event of any trade union desiring to raise any question with an employers' association, a meeting can be arranged by application to the secretary of the employers' local association to discuss the question.

Failing settlement by the local association and the trade union of any question brought before them, the matter shall be forthwith referred to the executive board of the federation and the central authority of the trade union, and pending the question being dealt with there shall be no stoppage of work, either of a partial or general character, but work shall proceed under the current conditions.

The rules of the Amalgamated Society governing the payment of "donations" and other benefits are as follows:

Any member of ten years' standing who is discharged or leaves his employment under circumstances satisfactory to the branch to which he belongs is entitled to donation benefit at the rate of 10s. (£2.43) per week for the first fourteen weeks, 7s. (£1.70) per week for the next thirty weeks, and a further sum of 6s. (£1.46) per week for so long as he remains out of employment; but in no case shall he receive more than £19 18s. (£96.84) in any period of fifty-two weeks. Members of less than ten years' standing but not less than five are entitled to 10s. (£2.43) per week for the first fourteen weeks, 7s. (£1.70) per week for the next thirty weeks, and 6s. (£1.46) per week for the next thirty-four weeks, when the benefit terminates; and in no case shall a member of less than ten years' standing, receive more than seventy-eight weeks' donation benefit in succession. Members with less than five years' standing receive 10s. (£2.43) per week for the first fourteen weeks; 7s. (£1.70) per week for the succeeding fourteen weeks, and 6s. (£1.46) per

week for the following twenty-four weeks; but in no case shall the benefit exceed fifty-two weeks in succession. Any member who has been paid benefit during the twelve months previously shall receive only the balance of the benefit to which he is entitled. Thus, a man who has received full benefit of 10s. (\$2.43) a week for any period short of fourteen weeks becomes entitled to a continuation of such benefit for a further period which would make up fourteen weeks, and so on.

Any member losing employment through neglect of his work, drunkenness, or disorderly conduct is not entitled to benefit until he has again been in employment at the trade eight consecutive weeks at the ordinary rate of wages. A man who from private objections refuses work, or neglects to apply for work when informed of a vacancy, is not entitled to benefit until he again obtains employment at his own trade and shall have received the ordinary rate of wages for four successive weeks.

A member thrown out of employment because of a strike for an advance of wages, or against a reduction of wages, or for other causes approved of by the district committee, or the council, as the case may be, is entitled to contingent benefits at the rate of 5s. (\$1.22) per week. Contingent benefit is limited to fifty-two weeks.

Any member who is sick, when such sickness is not due to drunkenness, disorderly conduct, or any disease improperly contracted, is, if a member of ten years' standing, entitled to 10s. (\$2.43) per week for twenty-six weeks and 5s. (\$1.22) per week so long as he continues ill, but not to exceed a total of £19 10s. (\$94.90) in the first fifty-two weeks. If he has under ten and not less than five years' membership, he is entitled to 10s. (\$2.43) per week for twenty-six weeks, and 5s. (\$1.22) per week for seventy-eight weeks, when the benefit terminates. If he has under five years' membership, he is entitled to 10s. (\$2.43) per week for twenty-nine weeks and 5s. (\$1.22) per week for thirty-two weeks. The member, on his recovery, must send notice in writing to the secretary within two days, or be fined 1s. (24 cents). No member receives benefit for less than three days, and no member is paid sick benefit for any day that he has partially worked. As in the case of donation benefit, the same deduction is made when members have received sick benefit within one year from date.

Any member who by accident or otherwise is permanently disabled and unable to follow his trade is paid the sum of £100 (\$486.65).

Any member of 55 years of age who has been for twenty-five years successively a member of the society, who is not in arrears, and who through old age or infirmity is unable to obtain the ordinary rates of wages or to follow his usual occupation, may receive the sum of 7s. (\$1.70) a week, or if thirty years a member, 8s. (\$1.95) a week; if thirty-five years, 9s. (\$2.19) a week; if forty years or upward, 10s. (\$2.43) a week.

The last (1902) annual report of the society showed an income account for the year of £353,402 1s. 6½d. (\$1,719,831.21), of which £331,206 16s. 2½d. (\$1,611,817.94) was received from contributions, fines, and levies. There was brought forward from December, 1901, a balance of £492,356 12s. 4d. (\$2,396,053.48), consisting of branch and office balances, amounting to £262,182 1s. 9½d. (\$1,275,909.14); general fund investments, £94,117 16s. 8d. (\$458,024.44); superannuation reserve investments, £135,856 13s. 10½d. (\$661,146.60), and moneys in transit, £200 (\$973.30), making a gross total of £845,758 13s. 10½d. (\$4,115,884.69). The expenditure for the year was £265,263 12s. 11½d. (\$1,290,905.54), of which donation benefits, travelers, etc., absorbed £87,029 2s. 3½d. (\$423,527.19); sick benefits, £50,199 15s. 3d. (\$244,297.14); superannuation benefits, £95,767 8s. 8½d. (\$466,052.22); general and branch officers' salaries, £10,711 19s. 8½d. (\$52,129.88); printing, stationery, postage, telegrams, salary of treasurer and other salaries not already mentioned, rent, taxes, insurance, and legal and other expenses, £21,555 7s. (\$104,899.11).

Mr. Arnold F. Hills is the president of the Thames Iron Works, Shipbuilding and Engineering Company, Limited, one of the largest shipbuilding and engineering concerns in London. The company employs in busy times from 3,000 to 5,000 men, and at the time this investigation was made had more than 4,000 men on its pay rolls.

Mr. Hills indorses unionism, because, in his belief, it led to better relations between employer and employee, after both had passed through a period of conflict. That conflict, as usually happens in the progress and evolution of society, resulted in a clearer and better understanding of the "rights" of both sides. The effect of unionism has been, in the opinion of Mr. Hills, to give the men a feeling of security and stability, without which no man can amount to much; and it has also had a tendency to steady and discipline the men. Furthermore, one of the results of the men combining and forming themselves into a union has been to make the employers form a federation, thus leading to two well-organized and disciplined hosts instead of two loose and disjointed bodies, one of which was engaged in isolated attacks, which the other was trying to repel. As a result, Mr. Hills, speaking from his experience in the management of his own great establishment, says that the relations existing between himself and his employees are, and have been, of the most friendly character for several years past, and there has been no strike of any consequence and no serious disagreement for the past ten years.

It should be stated, however, that the friendly feeling which undoubtedly exists between Mr. Hills and his workmen may be traced in part—and one would be justified in believing in a very large part—to the policy which has characterized his management of his company. The Thames Iron Works, Shipbuilding and Engineering Com-

pany presents the striking and extremely interesting anomaly of an industrial establishment working its men only eight hours a day, when nine hours constitute the normal day in the shipbuilding and engineering trade. It must not be understood from this that the Thames Company is the only concern where the eight-hour system prevails. There are others, both in and out of London, but all told they are in a decided minority, and concerns like Mr. Hills's and others, where all over eight hours a day is paid for as overtime, are brought in direct competition with firms whose normal day is nine hours, or one-eighth more. At the time of the great engineering strike and lockout, to which reference has been made, the Thames Company conceded the eight-hour day. Despite the fact that the hours in the Thames Company are shorter than those in most other establishments, Mr. Hills says that his company is able to make money and to hold its own with its competitors. He attributes this to the fact that the difference in time is more nominal than real. In shipbuilding yards working nine hours a day, there are three breaks as against only two in his establishment, and he estimates that each of these breaks means a loss of about ten minutes in the stoppage and resumption of work; and, furthermore, that when men work with only one division in their day's labor, instead of two, there is a further saving of time. Therefore this accounts for part of the hour, and the remainder of the time, in the belief of Mr. Hills, is compensated for by the better condition of the men in their being able to work as well at the end of the day as they are at the beginning. He says quite frankly that, without going too scientifically into the causes, the results are such as to satisfy him. Possibly also the amicable relations existing between employer and employee in the Thames Iron Works, and the satisfactory nature of their output and its cost, may be due to what Mr. Hills describes as the "good-fellowship system," which is practically what is known in the United States as the "premium system," and is based upon the workmen being able by superior diligence or more intelligent work to earn a premium on the normal amount of his labor based on the normal wage. In taking a contract for the building of a war ship, which is the principal work of the Thames Company, the basis of the estimate of the calculation is made on the amount of labor and materials per ton of construction, the unit of measurement being the ton. If the labor cost falls below this estimate the workmen profit by the difference and earn a premium on their wages.

How the "good-fellowship system" came into existence and its results are thus explained by Mr. Hills:

On July 9, 1889, the boiler makers went out on strike to secure the principle that no workman in their trade should be employed by the company except such as belonged to their union. This struggle lasted for over three months. It involved over 200 workmen and a loss of wages exceeding £3,000 [\$14,600].

Stirred by the combative example of their comrades, the laborers went out on August 23, demanding an increase of wages, with a minimum of 6d. [12 cents] per hour. This strike did not last long, breaking down of its inherent weakness, but it involved 1,396 workmen and a loss of wages of £1,785 [\$8,687].

On March 1, 1890, the joiners went on the warpath, demanding an increase of wages from 6s. 6d. [\$1.58] to 7s. [\$1.70] a day, and stayed out until June 23 of the same year. This strike involved 50 skilled workmen and a loss of wages of £1,560 [\$7,592].

A year later, on August 11, 1891, the engineers were infected with the same fighting frenzy, and called out their men, because at the time we had undertaken to repair a hydraulic press for Messrs. Samuda, with whom their union had a difference. This strike lasted only three weeks, till September 2, but it involved 236 workmen and a wage loss of £1,317 [\$6,409].

And finally, on November 24, 1892, the shipwrights, not to be left out in the cold, called their men out, demanding 7s. [\$1.70] a day for a forty-eight-hour week. This strike originally involved some 50 men, but it dragged on for more than eighteen months, and must have cost the shipwrights a wage loss of more than £7,600 [\$36,985].

Not one of these strikes effected the object for which it was instituted.

The good-fellowship system was established during the strike period in the year 1892. It laid down as a first principle that the interests of capital and labor were identical, and that every workman should be encouraged to take a direct personal interest in the product of his own hand.

It took the position that, beyond his normal weekly wages, every workman might, under well-devised conditions, be expected to earn more, both for the company and himself.

The labor value of every contract, and, so far as possible, of every job and piece was ascertained, and when the wage cost of production was less than the labor value thus ascertained the balance of gain was divided in monthly distributions among those who had earned it by extra skill and energy.

In the course of establishing a somewhat elaborate and intricate system many mistakes were made, but never to the disadvantage of the workmen. It was a bona fide attempt to break down the old vicious system of subcontracting, in which the ganger took all the spoils and sweated his men; and for the most part something more than justice was done to all whose work could be included under the new system of measurement and reward.

At all events, more than £80,000 [\$389,320] has been paid in good-fellowship dividends during the last ten years, and I expect that this amount will be at least doubled in the decade yet to come.

Two years after the establishment of the good-fellowship system the way lay open for the introduction of the eight-hour day, and I beg once again to repeat that it was only the good-fellowship system which made its introduction possible and its experience a practical success. Theorists and doctrinaires may demonstrate to their own entire satisfaction that the deduction of one hour from the day's work must, under the present conditions of international competition, prove the inevitable prelude to England's commercial destruction; but, after all, the proof of the pudding is in the eating, and we of the Thames Iron Works have no cause to complain of our adoption of the eight-hour day.

What are the facts? The eight-hour day, or, to speak more correctly, the forty-eight-hour working week, was introduced into our works on April 26, 1894. Here are the annual wage bills for the nine years preceding and the nine years subsequent to its establishment:

	£	s.	d.		£	s.	d.		
1885...	164,086	16	2	[\$798,528.45]	1894..	106,243	15	1	[\$517,035.23]
1886...	142,852	5	10	[695,190.68]	1895..	152,916	18	6	[744,170.21]
1887...	115,263	4	5	[560,928.46]	1896..	165,637	0	11	[806,072.68]
1888...	137,355	8	2	[668,440.10]	1897..	231,415	9	9	[1,126,183.47]
1889...	113,192	12	6	[550,851.91]	1898..	265,209	12	3	[1,290,642.58]
1890...	182,606	18	11	[888,656.70]	1899..	279,115	2	8	[1,358,313.80]
1891...	212,941	17	7	[1,036,281.66]	1900..	301,472	18	1	[1,467,117.89]
1892...	199,858	9	4	[972,611.23]	1901..	324,049	1	7	[1,576,984.84]
1893...	112,590	14	4	[547,922.72]	1902..	239,647	13	0	[1,166,245.29]
Total.	1,380,748	7	3	[6,719,411.91]	Total.	2,065,707	11	10	[10,052,765.99]

An increase in output, as measured in wages of over £70,000 [\$340,655] a year, or an average aggregate increase of 50 per cent, does not seem to indicate that the good-fellowship system and the eight-hour day have led to any decrease in orders, so far as our experience to date is concerned.

Let me make a comparison between five vessels of war built before the introduction of the eight-hour day and five constructed since. The mean average of labor (all trades) in the case of *H. M. S. Benbow, Sans Pareil, Blenheim, Grafton, and Theseus* was £28.66 [\$139.47] per ton; the mean average cost of labor (all trades) in the case of *I. J. B. Fuji and Shikishima* and *H. M. S. Albion, Duncan, and Cornicullis* was £26.85 [\$130.66] per ton, or a reduction of cost of £1.81 [\$8.81] per ton.

The total weight of metal in the five earlier ships was 21,261 tons, which at £1.81 [\$8.81] equals £38,482 [\$187,273].

The total weight of metal in the five later ships was 30,365 tons, which at £1.81 [\$8.81] equals £54,961 [\$267,468].

With regard to profits, of which the exact figures can not be published, it is sufficient to say that, comparing the same two periods of nine years, before and after the introduction of the eight-hour day, they have very considerably increased, while the losses incurred on unsuccessful contracts have during the later period been reduced by three-fourths.

The figures in regard to good-fellowship dividends paid to our workmen in excess of their standard weekly wages, which are the highest paid in any part of the United Kingdom, are equally illuminating. They are as follows:

	£	s.	d.	
1892.....	4,804	11	9	[\$23,381.53]
1893.....	2,503	16	8	[12,184.91]
1894.....	1,112	16	5	[5,415.54]
1895.....	5,852	2	6	[28,479.37]
1896.....	5,081	13	5	[24,729.95]
1897.....	7,774	5	7	[37,833.53]
1898.....	15,390	4	7	[74,806.55]
1899.....	13,135	6	1	[63,922.96]
1900.....	11,976	6	0	[58,282.66]
1901.....	9,579	8	8	[46,618.31]
1902.....	4,984	17	7	[24,258.91]
Total.....	82,195	9	3	[400,004.22]

But this is not all. The true criterion of manufacturing progress is to be found not in quantity alone, but as it may be combined with quality. Cheap construction is good, but first-class craftsmanship is better. How do we stand in this matter? Self-praise is no recommendation, but I think we may with proper pride point to the fact that the I. J. B. *Shikishima* (which was designed, built, engined, armored, armed, and put through her trials in the record time of thirty months) has been recently made the flagship of the Japanese Navy, and we may note that the engines of H. M. S. *Duncan*, *Cornwallis*, and *Albemarle* have passed through the most extensive trials without even water on their bearings, and that the gun trials have been completed without damage of any kind.

A similar statement could not be made of any of the other vessels of this class, and therefore I think that I may fairly claim that with shorter hours and higher pay the right hand of the Thames iron worker has not lost its cunning.

Thus, up to the present time, whether we regard the actual business results of the good-fellowship system and the eight-hour day from the point of view of the shareholder, the workman, the output of work, the cost of construction, the quality of workmanship, or the increase of profit and reduction of loss, the verdict seems to be equally conclusive.

But the commencement only has been made, and truly does the Frenchman say, *c'est le premier pas qui coûte*. No one beside myself will ever know the seemingly insuperable obstacles of prejudice, ridicule, and ill will through which this experiment in the economics of philanthropy has had to make its way.

Mais le jeu vaut la chandelle. The candles of good-fellowship and the eight-hour day have been lit in the Thames Iron Works, and by God's good blessing they shall never be put out till they have lightened the dark places of industrial tyranny and heralded the dawning of the golden day.

At the time of the interview Mr. Hills stated that four-fifths of his men were members of the various unions. While no discrimination is made between union and nonunion men, and the only thing considered in engaging a man and retaining him in the employment of the company is his efficiency as a workman and his general conduct as a man, Mr. Hills admits that his preference is for union rather than for nonunion men, because, as a rule, the better class of mechanics belong to the unions and the union man is therefore apt to be the superior workman, and also because in any question affecting relations between employers and men it is on the whole easier to deal with unionized labor than with labor that is not organized into a union.

Mr. Hills said that in the earlier days of unionism there was a good deal of friction between unions and employers, owing to the somewhat tyrannical and arbitrary methods employed by the unions, but now they have become more reasonable and take a more sensible view of things, with the result that the unions of the men have led to the federation of the employers, and both sides find it easier to get along amicably. When asked whether he would abolish the union if he had the power to do so his reply was an emphatic No, and he added that

he had done everything in his power to promote unionism. His reason is that unionism, instead of causing differences between employers and employees—which is the opinion held by many employers—has the effect of disciplining and steadying the men. It increases their efficiency, and also facilitates negotiations and communications between capital and labor.

Mr. Hills was asked whether the effect of unionism was to prevent or to make more difficult the introduction of labor-saving machinery; whether it tended in any way to hamper or restrict the conduct of business; whether it served to prevent men from doing the maximum amount of work, or using machinery or tools to the best advantage.

To these questions Mr. Hills replied that in the earlier days it was true that some of the unions had interposed an objection to the introduction of labor-saving machinery, but that time had passed and an employer could now put in all the labor-saving machinery he wanted and it would not arouse the antagonism of the men. Practically, he could make the same answer to the second question, because, as he had already said, the men did not try to interfere with the conduct of business, and he had already testified to the friendly relations which existed between himself and his employees. As to what is known as “ca’ canny” he could see no evidence of it, because although they were working only eight hours a day they were able to carry on a profitable business.

There is published quarterly by the Thames Iron Works an illustrated magazine—Thames Iron Works Quarterly Gazette—devoted to topics of interest to everybody connected with the plant. Mr. Hills called the attention of the writer to the Gazette for March, 1902, in which he defends with great vigor trade unionism and emphatically denies “that one of the great dangers by which our industrial supremacy is beset is the policy of the trade unions (express or implied) to encourage the restriction of output.”

For my own part, having now for many years had acquaintance with trade unions and the leaders of the labor world, I am prepared to affirm that this accusation of “ca’ canny” is not so much a charge as a calumny. It has been met and universally repudiated by the leading trade unions of the country and is, I believe, without substantial foundation or fact.

Let me repeat my own conviction as to the value of trade unions for the maintenance of British industry. Their function is not to hamper the employers, but to assist their members to a higher level of industrial prosperity. That in the main this worthy ideal has been followed may be easily seen from the articles on trade unions which have recently appeared in our Gazette. * * * The engineers have always been somewhat aggressive in their methods, as I have myself known by painful experience, but, like all aggressors, they have had to learn that fighting does not pay in the long run, and that the true function of unions is education, concentration, and, above all, conciliation, that the adjustment of labor conditions may be continuously in favor of

their own members. Force is no remedy in industrial any more than it is in international politics, and the mailed fist is apt to dip unpleasantly deep into the pocket of provident reserve. * * *

There can be no reasonable doubt that the trade unions of the country have, as a whole, rendered an incalculable service to organized labor. It needs only for amicable adjustment to be voluntarily made between the competing claims of capital and labor to secure the satisfactory settlement of the so-called industrial crisis of to-day.

In support of his assertion that the trade unions are something more than associations to encourage disputes and to support their members when on strike, Mr. Hills cited a series of articles which has appeared in the Gazette tracing the origin and growth of the principal unions embracing the trades employed at the Thames Iron Works. From these articles are gathered some interesting statistics relating to the income and expenditure of the unions, and especially to the amount expended under the heading, "provident benefits," that is, for the support of men out of work, due to causes other than strikes, such as accidents, trade depression, sick and funeral allowances, and old-age pensions. Thus, the United Society of Boiler Makers and Shipbuilders for thirty-four years expended £1,663,245 (\$8,094,182) for provident benefits, and £97,305 (\$473,535) for disputes. Since 1882 a table has been compiled showing the percentage of the cost of disputes to the whole income of the society. The highest cost was in 1884, when it amounted to 8½ per cent; the lowest was in 1900, when it was one-twentieth per cent.

In fifty years the Amalgamated Society of Engineers has expended for donation benefits £2,664,237 (\$12,965,509); for sick benefits, £1,156,024 (\$5,625,791); superannuation allowance, £1,153,491 (\$5,613,464); accidents, funeral, and benevolent funds, £531,425 (\$2,586,180), and "assistance to others," £319,716 (\$1,555,898). The society lumps the amount expended on disputes—that is, strikes—in the general benefit fund, so that it is impossible to tell what the percentage has been for strikes.

The Iron Founders' Society is one of the oldest trade unions in the United Kingdom. Since its existence it has spent in provident benefits £1,612,721 (\$7,848,307) and for dispute pay, £55,169 (\$268,480). The average cost per member a week for provident benefits has been 1s. ¼d. (25 cents), for disputes, ¼d. (1 cent), which means that for every half-penny the molders have expended to carry on industrial warfare they have devoted twenty-five times as much to succor the sick and aged, the injured, and the out of work.

On the vexed questions of the restriction of output the Iron Founders have officially placed themselves on record. In the annual report of the general secretary this language is used: "We favor restriction so far as not to allow a man to do as much for a time day's work as he would on piece, as, if one man with extraordinary strength

ability were allowed to go on unchecked, others would follow, and in many cases it would be utterly impossible for them to do so. Still, we expect every member to do a fair day's work for a fair day's wage. This is stipulated in many of the branch by-laws, leaving the branches to say what shall constitute a fair day's work."

In forty-one years the Amalgamated Society of Carpenters and Joiners has spent £1,543,850 (\$7,513,146) for provident benefits and £220,177 (\$1,071,491) for dispute pay.

The United Pattern Makers' Association does not keep a separate account of provident and dispute benefits, so that it is impossible to tell with exactness the proportion that each bears to the general expenditure of the society. Figures are available, however, showing that from 1896 to 1901 the total amount expended on purely strike pay was 1937 10s. (\$1,562.34), while the expenditure for sick and funeral benefits for the year 1901 was £2,804 16s. 10d. (\$13,649.76), which would indicate that the pattern makers, similar to most of the better managed and highly organized trade unions, devote most of their funds to be amelioration and improvement of their members rather than to support them while idle.

One of the largest employers of labor in London is Sir George Livesey, chairman of the board of directors of the South Metropolitan Gas-light Company, one of the three large companies furnishing the metropolitan area with gas. The area supplied by this company is 51 square miles, and the total number of its consumers is 252,677. In the opinion of organized labor Sir George Livesey is the bitter foe of unionism, for reasons which shall be more clearly explained later, but, despite this, several of the prominent labor leaders and officials of unions suggested that his views on the question should be obtained. When informed of the object of the writer's visit he said frankly that he was not regarded by some of the workingmen as particularly friendly to the unions, but notwithstanding his reputation he would endeavor to deal justly with the subject.

He came into the service of the company more than half a century ago and prior to that time his father had been in the service of the same company, so that practically his entire life has been spent in earning the business and managing it. With this experience behind him he is naturally regarded as one of the greatest authorities in his line in England, if not in the world, and his intimate knowledge of the British workingman and his character and peculiarities is exceeded perhaps by no other English employer of labor. At the present time some 4,000 men are on the pay rolls of the company.

In his opinion the union has been one of the factors in advancing and improving the condition of the men, and while it has not been an unmixed blessing, regarded from the standpoint of the employer, he is frank enough to say that the union has been the means in some cases

of increasing wages and decreasing the hours of labor. In many cases employers have looked too much after their own interests without regard for the interests of their employees, and if there had been no unions the conditions of the latter would have been harder. "I am afraid the unions have been necessary to prevent oppression," he remarked regretfully. He does not believe, however, that the unions have encouraged the men to do better work or to protect more carefully the interests of their employers. As he expresses it, each side has looked out for itself and not for the other, and while he admits that the decrease in the hours of the working day may be in some measure attributed to the unions, the increase in wages he should more largely attribute to the law of supply and demand and to the more humane conditions existing now, due to the general progress of society. In short, he sums it up by saying that the unions have hastened advances and retarded reductions, subject always to the general law of supply and demand.

In support of this assertion he cites the fact that unskilled labor, among which no unions exist, has obtained much greater advances in wages than skilled labor with its unions. In the thirties unskilled or common labor was paid 2s. 6d. (61 cents) a day of ten hours, or 3d. (6 cents) an hour; in the forties wages had increased to 3s. (73 cents) a day for the same number of hours, and that rate of increase has been maintained so that now that class of labor which in the thirties was paid 3d. (6 cents) an hour is paid from 6½d. (13 cents) to 7½d. (15 cents), and it is a better, a more intelligent class.

The South Metropolitan Gaslight Company is an industrial establishment of particular interest to the investigator of economic and sociologic problems, because it is probably the only concern in the world where the shareholders (that is, the proprietors), the purchasers (that is, the public), and the producers of the product (that is, the workmen) are members of a joint partnership to the extent that the lower the selling price of gas, almost paradoxical as it may sound, the higher the rate of dividend paid to the shareholder; and the lower the price of gas, which is of course an advantage to the consumer, the higher the wages of the men. It will therefore be apparent that it is to the interest of all concerned that gas shall be sold as cheaply as possible, and unlike any other business, where the greater the price paid by the consumer the greater the return to the proprietor, here the amount of the dividend rests upon a reduction of price.

This unique economic paradox is due to two causes. So far as the public is concerned it owes its existence to the act of Parliament regulating the price of gas and dividends; so far as the employees are concerned it is the direct outcome of an attempt made by the Gas Workers and General Laborers' Union to regulate the conduct of the company's business, and a determination on the part of the company

to resist outside interference and to submit to no meddling with its affairs.

By act of Parliament the divisible profits of the company rest on the price charged for gas. The initial or starting point is 3s. 1d. (75 cents) per thousand feet. At that price to the consumer the shareholders' dividend may not exceed 5 per cent. For every reduction of 1d. (2 cents) charged the consumer the shareholders become entitled, by the company's act, provided of course that the money is earned, to 2s. 8d. per £100 ($\frac{1}{10}\frac{8}{10}$ per cent) additional dividend; and on the other hand, should the price of gas be raised the dividend is reduced 2s. 8d. per £100 ($\frac{1}{10}\frac{8}{10}$ per cent) for every penny. It is, therefore, to the interest of the shareholders that gas should be sold as cheaply as possible. But the act of Parliament in applying the principle of the sliding scale to the public and the shareholders did not apply it to the employees of the company. Consequently, they had no direct interest in the price at which gas was sold.

In 1889 the company had a serious strike, the culmination of a long series of disagreements between it and the union relative to wages, conditions of employment, etc. To bring about peace, the company, on November 6 of that year, adopted the bonus or profit-sharing scheme with the "sole object," as stated in the report of the directors of that year, "of attaching the men to the company and securing their interest in its working. The mechanics and yardmen, with few exceptions, were not members of the union, and they almost to a man gladly and promptly accepted it. Acceptance was perfectly voluntary, but the stokers, guided by their union executive, almost to a man declined, and there the matter might well have rested, for no pressure was brought to bear upon them and they might have continued to work on the existing conditions. Although they had repeatedly said they were satisfied with their pay, they demanded the bonus in the shape of a weekly increase of wages, which was quite out of the question."

The union then demanded the discharge of three unionists who had signed the bonus agreement, and on the company rejecting this demand the men went on strike, the strike lasting two months, although the company was able to secure new men and keep its plant going with some inconvenience and at a largely increased cost. "The direct cost," the directors stated to the shareholders, "has been very heavy, probably no less than £50,000 (\$243,325), while the indirect expenses and losses may amount to about half that sum in addition. In consequence, a dividend of 12 per cent was declared for that year, instead of 13 $\frac{1}{4}$ per cent as at the last report."

Sir George Livesey conceived the plan of giving the men a direct interest in efficient and economical production by paying them a bonus on their wages based on the price of gas, this bonus to be at the rate of 15s. per £100 ($\frac{1}{4}$ per cent) on the annual salary of officers and the

wages of workmen for each penny (2 cents) at which gas sold below 3s. 1d. (75 cents) per 1,000 feet. At this scale if the gas was sold at or above 3s. 1d. (75 cents) per 1,000 feet there is no bonus; at 3s. (73 cents) the bonus is $\frac{1}{2}$ per cent; at 2s. 11d. (71 cents), $1\frac{1}{2}$ per cent; at 2s. 10d. (69 cents), $2\frac{1}{2}$ per cent; at 2s. 9d. (67 cents), 3 per cent, and so on down to 2s. (49 cents), when the bonus would be equivalent to $9\frac{1}{2}$ per cent.

One-half of the bonus is required to be invested in the names of three trustees in the company's ordinary stock until the amount credited to any profit sharer is sufficient to give him a stock certificate in his own name; the remaining half of the bonus is withdrawable at a week's notice, but it may be left in the company's hands to accumulate at interest, or it may be invested in stock with the trustees.

The bonus is paid only to those employees who work under written agreements to serve the company for various periods, not exceeding twelve months, with a proviso that any individual can leave by consent (which is always given) at any time, the directors reserving the right to refuse agreements to any man and to withhold the agreement in case a man has not shown a proper interest in his work. To prevent discrimination or favoritism no foreman is allowed to withhold agreements, which can be done only by action of the officers of the company. The bonus is calculated on the daily wages earned by the workman in the course of a year, overtime not being considered. No deduction is made for sickness unless the total amount of sickness exceeds two calendar months in any one year, and then only the excess over the two months is deducted. No bonus is earned until the end of the fiscal year (June 30) or the expiration of the agreement, and no employee is entitled to any part of the bonus until such times, except in case of death or on leaving the service of the company. When the bonus is earned and declared it becomes the absolute property of the employee, and under no circumstances whatever, except fraud, can the bonus, or any part, or any of its accumulations, whether in the hands of the trustees or in the name of the employee, be forfeited.

The bonus fund is managed by a committee of 36 members, of whom 18 are workmen and the remainder consist of the chairman of the board of directors and 17 members elected by the directory. A quorum consists of 17 members, of whom no fewer than 8 shall be workmen. This committee appoints 3 trustees—one director, one officer, and one workman—in whose names the bonus and the dividends as they accrue are annually invested in the company's ordinary stock. Any employee can at any time sell his stock at the market price on application to the secretary of the profit-sharing committee, but any employee selling his stock to an outsider without the consent of the secretary of the company at once ceases to be a profit sharer, notwithstanding any agreement he may have signed. In explanation

of this restriction it is said that at one time it was discovered that publicans and other undesirable persons were buying the stock from the men at a discount, and it was to discourage this and to prevent outsiders from profiting by the company's liberality that the rule was adopted. Any difference arising as to the construction of the rules adopted by the company shall be referred to the committee, whose decision shall be final, and no alteration can be made in the rules without the sanction of the committee. The company provides all necessary books and other incidentals and keeps the accounts and records without charge to the committee.

The result of the profit-sharing scheme has amply justified the most sanguine hopes of its promoter, who says it has been worth many times more than its cost. Sir George Livesey relates as proof of its economy that on one occasion he was explaining the scheme to one of the largest manufacturers in the north of England and said to him: "Is it not worth 5 per cent to feel that your men are contented and satisfied with the terms of their employment?" and the answer of the manufacturer was: "Five per cent; it is worth 20 per cent, and is cheap at that!"

Sir George Livesey says that in proposing the profit-sharing scheme, which at that time was an experiment fraught with a good deal of risk and more liable to failure than to success, he had two distinct and well-defined objects in view. One was to attach the men to the company and thereby improve the relations existing between the company and its employees, the other was to benefit the condition of the men. "Employers," he says, "must work in the direction of partnership with their men; in other words, they must make them partners in their business so as to make them take an interest in their work and achieve the best results for both. The interests of both are identical and not antagonistic, and that both sides ought to recognize."

Since the profit-sharing scheme went into operation the company has not discriminated between union and nonunion men. At the present time both union and nonunion men are employed, and work side by side and apparently without friction. Whenever a man is engaged no question is asked whether he is or is not a member of a union; the nonunion men do not object to the presence of union men except in those rare cases where the nonunion men have reason to believe that the unionists are not working for the best interests of the company. To use Sir George Livesey's words: "The men work very comfortably together."

He is firmly of the opinion that the scheme has done more for the men than the union could have accomplished, and he is equally firm in the opinion that the company has profited by it. So far as the men are concerned he is convinced that they are better off, because not only are they paid the same wages that are paid by all the other met-

ropolitan gas companies, but in addition they receive the bonus, and the company deals liberally with them in the matter of holidays, contributions to sick and benefit funds, and in other ways. He remarks that the attitude of indifference and the look of sullenness which was formerly so noticeable on the face of the workingman has disappeared and given place to one of content. Foremen are greeted with a pleasant "good morning," and give the same in return. He says that the cheerful, contented, satisfied workingman is worth all that he costs.

That the company is better off by the present arrangement, and this means in the last analysis the public, because under the mutual arrangement the cheaper the gas can be produced the lower is the price to the consumer, has been quite clearly demonstrated by the figures of cost in one important branch of gas manufacture. At the time when the union was strongest it cost the London companies from 2s. 6d. (61 cents) to 2s. 8d. (65 cents) per ton of coal for the labor of handling the coal and removing the coke, what is known as the retort-house work, all the companies paying the same wages. The demands made by the union and the restrictions it imposed resulted in increasing the cost about 1s. (24 cents) per ton. After the South Metropolitan Company broke with the union the cost to that company for such work was gradually reduced to the old figures, or even a trifle below, while the other metropolitan companies have been able to effect a reduction of only a few cents; but, Sir George Livesey points out, this economy has not been reached by reducing the rate of wages or increasing the hours, in other words, not by sweating or exploiting labor, because exactly the same wages for the same number of hours are paid by all the companies. It is the result of his company having overthrown the tyranny of the union, and it is the better work done by men who are more satisfied and who take a greater interest in their work. Much of this economy, he admits, is due to the introduction of machinery for drawing and charging the retorts, but he calls attention to the fact that machinery had been of little use to the other companies because the union would not allow them to obtain its full benefit, having imposed restrictions and regulations which prevented the machinery from being worked to its highest capacity. These other companies are now making better use of machinery and other labor-saving devices because the Gas Workers' Union, he says, has lost its power, and no longer exercises the dominant influence that it did at the time when he had his great contest with it. As proof that the men will use machinery to the best advantage when they are not prohibited from so doing by the rules of the union, he says that it has been found necessary to fix a limit of work upon the retort-house men, otherwise they would do more than they properly ought to do. Further, he said:

Any system of profit sharing that treats all employees alike, the efficient and the less efficient, and pays them all an equal bonus, is in my

opinion a bad system, and has been one of the reasons why profit-sharing schemes have not been successful. When that system exists the men simply look upon the amount of profit as so much extra wages which they will receive in any event, which does not depend upon the character of their work. In our case the men know that only those are entitled to a share in the profits who have signed the agreement, and because an agreement may be withheld in the case of a man whose work has not proved satisfactory, they strive to do their best to entitle them to receive the agreement. Men value these agreements so highly that on the day they expire they apply for a renewal, and in many cases the wives come with their husbands and take charge of the agreements when they have been delivered, so important do they regard them.

The unions, I believe, have been an enormous injury to industry. Take the case of the bricklayers for example. By common consent it is admitted that a bricklayer some few years ago could lay 1,000 bricks a day, while now the average day's work is 400 or less. The whole tendency of unionism is to give as little and get as much as possible. Still I am bound to say that this also has been the principle of some employers; but what I am afraid of is that the union looks only on one side of the question. I think there is no doubt that the unions have restricted the use of machinery, and that the unions are largely responsible for many disagreements between employers and men. The old days of the tyranny of the employers have gone, but the tyranny of the union is still with us.

It is worthy of mention that in August, 1903, the price of gas was 2s. 3d. (55 cents) per 1,000 feet, or 10d. (20 cents) below the standard; therefore the annual bonus was equivalent to $7\frac{1}{4}$ per cent on wages and salaries. The bonus has fluctuated with the price of coal. In 1892 the bonus fell from 5 per cent to 3 per cent; in 1900 it dropped from 9 per cent to nothing, and started again at $3\frac{1}{4}$ per cent in 1901. The men, however, accepted the position cheerfully, and relaxed none of their interest in the company.

The company's semiannual report for June 30, 1903, showed that the employees had £190,000 (\$924,635) in the stock and on deposit at interest with the company, an average of about £45 (\$219) a man.

Sir George Livesey is a director in the Crystal Palace District Gas Company, and through his influence the profit-sharing and agreement system has been adopted by the company. Although it has been in operation only a short time the results are satisfactory, and as much for the benefit of the company as they are for the men.

The South Metropolitan Gas Company has also established an accident fund, which, by mutual agreement, is a substitute for the workman's compensation act, 1897. (^a)

All men employed by the company in receipt of weekly wages are invited to contribute to the fund and become its beneficiaries, the fund

^aSee Bulletin of the Department of Labor, No. 32, January, 1901: The British Workman's Compensation Act and its Operation, by A. Maurice Low.

to be used to compensate the men for loss by reason of accident while in the employ of the company. Every man in receipt of weekly wages exceeding 21s. (\$5.11) pays $\frac{1}{2}$ d. (1 cent) a week; men whose wages do not exceed 21s. (\$5.11) a week pay half that sum and receive half the benefits. The company contributes at least twice as much as the men. The scale of compensation is as follows:

Minor or slight accidents, disabling for not less than three days or more than a fortnight, entitle members to benefit at the rate of 12s. (\$2.92) a week, excepting those men who subscribe an extra 3d. (6 cents) per week to the sick fund, who receive, in addition to the accident allowance, the weekly payment to which the extra 3d. (6 cents) entitles them according to the sick-fund rules.

Serious accidents, causing incapacity for more than a fortnight, entitle members to the benefit at the rate of 18s. (\$4.38) a week.

The benefit for accidents clearly caused by the negligence of the company or its officers is 24s. (\$5.84) a week.

Any member whose injuries have been caused by his own "serious and willful misconduct," whatever may be the period of disablement, receives nothing from the accident fund, but if he is a member of the sick fund, receives benefit therefrom according to its rules.

In addition to the money allowance free medical attendance is furnished.

The company pledges itself to find work for injured men on their recovery (except those men whose injuries are due to their own "serious and willful misconduct") at not less than 24s. (\$5.84) a week, if the wages exceeded that amount, and for those injured by the negligence of the company, at not less than four-fifths of the day wages previously received, and in no case less than 24s. (\$5.84) a week, if the wages exceeded that amount.

In case of permanent incapacity to do any work, the profit-sharing committee decides what permanent weekly allowance or lump sum shall be paid, in addition to any pension from the superannuation fund to which the injured man may be entitled, but the total shall be not less than he could have obtained under the act of 1897.

The amounts due at death from sick and superannuation funds shall be paid, and a pension of not less than 10s. (\$2.43) a week shall be granted to the widow while leading a respectable life or until remarriage, at which time a sum not exceeding £10 (\$48.67) shall be paid her. However, the profit-sharing committee may, according to circumstances, grant, during the first three years, any amount not exceeding £1 (\$4.87) per week, which amount may be reduced gradually to the minimum of 10s. (\$2.43) at the end of three years or sooner. If the deceased man was a widower leaving children dependent, or a man leaving other dependent relatives, the profit-sharing committee

shall decide what, if any, allowance shall be made, but it shall in no case exceed what would have been given had there been a widow with children.

The rules of the fund provide for a jury of twelve workmen to inquire into accidents and fix the responsibility. In order to secure an impartial jury, an alphabetical list is made of men who have been in the company's service for three years, and in selecting a jury the names are taken in the order in which they appear on the list. The jury is required to hear evidence, and, to the best of its ability, to arrive at the real cause of the accident, not hesitating to say whether any blame attaches to any official or workman, or whether the plant, machinery, or means of protection are defective, if satisfied there has been any neglect, carelessness, or defect. The jury shall determine, if necessary, the class in which the injured man shall be placed, and in case of dispute the question shall be decided by ballot by a two-thirds majority. The jury shall sit in public—that is, in the presence of as many of the workmen as can conveniently attend without interfering with their work.

No alterations or additions to the rules can be made without the approval of two-thirds of the men, and nothing can be done that would make the provisions of the scheme less favorable to the men than the provisions of the act.

There has also been created a sick and burial fund and a superannuation fund (two separate and distinct funds), membership in which is voluntary and is not a condition of service. To the first the weekly contributions range from 3d. (6 cents) to 6d. (12 cents), and the relief from 6s. (\$1.46) to 18s. (\$4.38) per week; at death a sum of £12 10s. (\$60.83) is paid to the member's representatives; on the death of a member's wife he is paid £7 10s. (\$36.50). The company subscribes yearly such amount as may be required to insure the financial stability of the fund, and also bears all the cost of management.

Any workman over 18 and under 40 years of age may join the superannuation fund. The ordinary contribution to the fund is 3d. (6 cents) weekly, but 6d. (12 cents) a week may be subscribed, and entitles the subscriber to increased benefits. The company subscribes not less than 3d. (6 cents) a week for each man and guarantees the stability of the fund; the company also pays all expenses of management.

Every subscriber of not less than twenty-five years' membership shall have the right to claim his pension when he is 65 years of age, a contribution of 3d. (6 cents) a week for twenty-five years yielding a weekly pension of 11s. (\$2.68), and of 6d. (12 cents) a week 15s. (\$3.65), the scale rising to 17s. (\$4.14) and 23s. 6d. (\$5.72) a week, respectively, for forty-three years' membership. Any member who has subscribed for ten years to the fund and has been in the service of the company for not

less than twenty-five years, in the event of infirmity due to natural causes, shall receive weekly not less than 10s. (\$2.43); a member who has subscribed for less than ten years, in case of leaving the company's service for any cause (fraud and dishonesty excepted), is entitled to the return of all his payments; if he has subscribed for more than ten years, to a return of two-thirds of his payments, no interest being paid on the money thus refunded; a subscriber of not less than twenty-five years' membership and not less than 55 years of age, who desires to retire before he can claim his full pension, may, instead of drawing out his money, receive a reduced weekly or annual allowance, the reduction to be at the rate of 1s. (24 cents) per week if the member has subscribed 3d. (6 cents) per week, and 1s. 6d. (37 cents) per week if the subscription has been 6d. (12 cents) based on the scale for every year short of sixty-five.

The widow or dependent children of any member who has subscribed for less than ten years to this fund are entitled to a return of the whole amount of the member's payment; in the event of the member having subscribed for a longer period than ten years the widow or children are entitled to a return of three-fourths of the member's payments, but if the member has received benefit of less amount than the three-fourths of his payments, his widow or children are paid the difference.

In case a man leaves neither widow nor dependent children the amount of his contributions lapses to the fund.

The accounts of the various funds for the year 1902 show that 3,533 workmen contributed £2,398 13s. 9d. (\$11,673.21), to the superannuation fund, and the company £3,264 4s. 1d. (\$15,885.25), the payments from the fund being £3,394 17s. (\$16,521.04). On January 1, 1903, there was a balance to the credit of the fund of £36,636 19s. 5d. (\$178,293.82).

There were 4,422 contributors to the sick and burial fund, whose payments aggregated £4,178 17s. 3d. (\$20,336.43), the company contributing £1,486 5s. 6d. (\$7,232.96) to meet the deficiency. This entire amount was expended.

To the accident fund 5,544 men contributed £501 18s. 3d. (\$2,442.56) and the company, £1,120 15s. (\$5,454.13), the whole amount, with the exception of a balance of less than \$150, being used in paying accident benefits and in paying pensions to widows of workmen who lost their lives in the company's service.

Mr. William Brace is the vice-president of the South Wales Miners' Federation and a member of the central council of the Miners' Federation of Great Britain; he is also a member of the royal commission appointed to inquire into the coal resources of Great Britain, which is now sitting. Mr. Brace has never done any work except as a miner. The territory of the South Wales Miners' Federation comprises South Wales and Monmouthshire, and, in round figures, 150,000 men and

boys are employed. Practically every worker in the mines is a member of the federation.

For a number of years past wages have been regulated by a sliding scale, the selling price of coal being the factor in determining wages. The last sliding scale was signed in 1898 to continue for four years—after a seventeen-week's strike for the purpose of obtaining better wages. At the beginning of the strike the men were poorly organized and returned to work without having improved their condition. They immediately began a systematic organization and affiliated themselves with the national federation, which includes all mine workers except those working in the Durham and Northumberland coal fields. At the end of the four years the sliding-scale system was abolished and there was substituted for it a conciliation board to adjust the question of wages, with Viscount Peel, the late speaker of the House of Commons, as the independent chairman of the board.

Lord Peel's functions are similar in some respects to those of Lord Davey, as chairman of the Durham Miners' Association, already described, but Lord Peel possesses power only to decide for or against any direct proposition presented to him, and does not enjoy the power to deviate by way of awarding a less amount of advance or reduction which either side may have demanded. The result of this new system in a sense revolutionized conditions existing in the South Wales coal fields, and has led to work having been continued since that time without any stoppage caused by disagreements between employers and the men. The organization of the men led to a similar and equally powerful organization on the part of the colliery owners.

Without question, in the opinion of Mr. Brace, trade unionism not only has improved the condition of the miners, but also has demonstrated its beneficial influence in preventing strikes or lockouts. "At every colliery," he explained, "there is what is known as a works committee, which has power to deal with local disputes and discuss the various questions which are constantly arising. In the case of the failure of the works committee to agree with the representative of the owner and adjust differences, resort is had to one of the general officers of the Miners' Federation, who meets the manager; and in the event of these two men being unable to agree the case comes before the conciliation board. The result is shown in very few strikes, and those of such a trivial character that they are hardly worthy of notice."

I am a firm believer in the moral and educational value of the trade union. There is hardly a mining village without its institute containing gymnasium, billiard room, library, and other accommodations for the recreation and improvement of the men, which is supported by the joint contributions of men and employers, but is exclusively controlled by the men. These institutes have done much to improve the condition of the men and are only a part of the educational and progressive work which is such a distinguishing feature of trade unionism. As

a result of the men being organized into unions they acquire a larger and wider knowledge of affairs, because at their meetings not only are practical questions affecting the trade discussed, but also politics, economics, and the other leading topics of the day, the leaders of the union acting as teachers.

Mr. Brace was asked if in his opinion the masters as a body could abolish the union would they do so, to which he answered:

It is my firm conviction that while some would, owing to their prejudice against the union and their dislike of it and its methods, the majority of employers would not, because they believe that it is the union which makes collective bargaining possible, and collective bargaining is better than individual bargaining. With the union employers can deal with employees as a body; if there was no union each employer would have to deal with each employee separately.

Labor leaders, that is the most progressive and sensible, are opposed to anything that will lead to a stoppage of work, because they know that ultimately the cost will fall upon the workmen. They realize that it is for their own interest to help their employers to make money, so as to enable them to share in their good fortune.

The South Wales Federation prohibits the working of union men with nonunion men because they believe it is a dishonest practice. They say that the nonunion men obtain all the advantage which has been gained at the expense of the union, and therefore if a man profits by what has been won for him by the union it is only right and proper that he should belong to the union and give it his material and financial support. The grievance of the union men is not against the employers, but against the nonunion men, and to force the nonunionists into the union they are prepared to go to the length of striking if necessary.

Mr. Brace asserts that his union has never attempted to restrict output, interfered in the management of the business, or objected to the use of machinery.

The second largest trade union in Great Britain, and one of the most important because of the intimate relations existing between its members and the public at large, is the Amalgamated Society of Railway Servants, with a membership of 60,000. Its general secretary and executive officer is Mr. Richard Bell, member of Parliament for Derby in the labor interest, a man of great intelligence and breadth of view. Mr. Bell, like all other trade-union leaders in Great Britain, is a practical member of the craft which he represents, and for many years worked on the railroad as a guard (conductor) and in other capacities. All his influence has been directed against strikes and in favor of averting strikes unless a strike was the only remaining remedy to redress wrongs. Recognizing the union as an educational and social force, a force which has been mutually beneficial for both capital and labor, his efforts have been exerted toward the exercise of conciliation when-

ever possible, and in bringing about a better and more intelligent understanding between the man who pays and the man who is paid.

In a discussion on trade unionism in general and the work of his society more especially, Mr. Bell said that the union had undoubtedly been an advantage to employers, because it had enabled them to deal with their men collectively, through officers of the union, rather than with individuals, which was not only a saving of time and labor, but was also much more satisfactory in reaching definite results. The question of so-called "compulsory arbitration" was mentioned to Mr. Bell, who said that he did not favor the scheme because he did not believe that it would produce practical results. What Mr. Bell does most emphatically support is a method of settling disputes, or perhaps it might be more correct to term it a method to prevent disagreements, by what he terms "compulsory conciliation." To carry this idea into effect Mr. Bell has introduced into Parliament a bill, which applies only to railways, which makes it impossible for a strike or a lockout to take place until after the matter has been submitted to a board of conciliation. The full text of Mr. Bell's bill will be found in Appendix B.

The majority of the members of his society, Mr. Bell says, approve the bill and would like to see it enacted into law, but owing to the opposition of the employers no action has as yet been taken on the measure. Mr. Bell is frank enough to say that a great majority of strikes are due to the stubbornness or stupidity displayed on one side or the other, and anything that would substitute a rational method for passion, prejudice, or ignorance would be an immense gain to society. In view of the Taff Vale decision it is quite natural that Mr. Bell should deeply deplore the tendency of "government by injunction." The use of the process of injunction is regarded by Mr. Bell, in common with other labor leaders, as a misuse and perversion, and dangerous to the rights and liberties of the subject.

Mr. Bell points out that the union has been of immense advantage to the workingman. He said:

It has done a very great deal for him. It has elevated him generally; it has improved his wages; it has raised his standard as a worker; it has reduced his hours, and, generally speaking, the hours of workmen in Great Britain are lower than in any other country, due solely to trade unionism and the agitation which we have carried on in favor of a reduction of time. I think it may be fairly said that no employer will spontaneously increase wages or reduce hours. In other words, whatever he has given in that direction he has been made to give, partly owing to the force of public opinion; but public opinion has simply become an effective force after we have crystallized that opinion.

In various ways the trade unions have raised the standard of the workingman, and in no other direction has it done so much as in inculcating the virtue of temperance. I believe I do not exaggerate when

I say that nine out of ten of the trade-union leaders are total abstainers; of seven general officers of this society five are strict temperance men. Trade unionism sets its face against drunkenness, because it knows perhaps better than any other organized agents of society the evils of intemperance and the mischief that is caused by drunkenness. Trade unionism has always taken an active part in all outside movements that might in any way be a benefit to the great body of wage workers, such as the housing problem, temperance reform, old-age pensions, etc., and it has by cooperation been the means of men owning their homes and thereby enabling them to acquire a provision for their old age. It has encouraged thrift, good-fellowship, charity; it has brought men into closer relation with each other, which has made them more tolerant, and, if I may use the expression, more humane. Roughly speaking 95 per cent of the members of trade unions are also members of friendly societies, which is absolute proof that our men are becoming more saving and displaying a broader spirit of fellowship.

Not less valuable has been the work of the trade union in encouraging better work. Our union will not pay benefits to a man who has been dismissed because his work has been badly performed, and we have always impressed upon our men that they must do their very best in whatever capacity they may be placed. It has been often asserted that the tendency of trade unionism in fixing a standard wage is to level down the best man to the plane of the worst, but that I deny. We do not fix the maximum wage, but simply the minimum, and it is left to the employer to pay the employee whatever additional wage he is deemed worthy of as compared with the employee of lower capacity. Intelligent employers recognize this and reward it by compensating the better workman; thus the locomotive engineer who by more care and greater skill can cover a certain mileage with a smaller consumption of coal than one who burns more coal, and thereby decreases the cost of operation, receives on some railways a bonus based on the amount of money saved. I think it may be said that every man, speaking generally, of course, is anxious to do the best work that he can, provided he knows that his work will be properly recognized.

We have seldom opposed the use of machinery; we have never objected to larger locomotives and trucks, which are an economy and facilitate traffic, but we do claim that when such improvements are introduced they should be of mutual advantage and the men as well as the employer should receive some of the benefits. A larger engine hauls a greater number of wagons [cars], which imposes on the engineer greater responsibility and greater labor. Now it is not fair in such cases that the engine driver should be paid no additional wages. If employers will frankly recognize that when, through the introduction of machinery or other improved methods, they add to their gains a percentage at least of that gain should go to the men who make the use of that machinery possible, the friction which has often arisen between employers and employees over the use of machinery will disappear.

You ask me whether employers generally, if they possessed the power, would abolish the trade union. I can only say to that, in my opinion, one-half of them would and the other half would not.

So far as our own organization is concerned, we work on absolutely peaceable terms with nonunion men; in fact, it is difficult for anyone to distinguish between union and nonunion men in their daily inter-

course, and, so far as my experience and knowledge go, that is the practice of the better class of trade unions in this country.

Mr. David Alfred Thomas, for the last fifteen years senior Liberal member of Parliament for Merthyr Tydvil, the largest mining constituency in Great Britain, has for many years been what is known as an independent coal operator, that is, he is not a member of any employers' federation, but deals directly with his men.

"You are fully a generation behind us in America in the relations affecting labor and capital," was the opening remark of Mr. Thomas, when asked to give his views on the question under consideration, and he continued as follows:

In England the employers do not object to meeting the men to discuss conditions of employment; in fact, they regard that as a part of the business. The influence of the times, good or bad, is far more potent on wages and the relations between employer and employee than is any organization. From the standpoint of the employer, broadly speaking, I am of the opinion that the union has exercised an influence for good because it has established better relations between the two sides and has put in force collective bargaining, which is a thing much more to be desired than individual dealings. For these reasons the union has my approval.

So far as the South Wales colliery owners are concerned, the demands of the union for higher wages and shorter hours have enabled the owners to insist upon and obtain higher prices for their coal. Prior to that time the owners fought each other and cut prices in their competitive efforts, so that it became a common saying that the coal business was either a feast or a famine; either great profits were made or else the business was conducted virtually at a loss. In the time of large returns the men obtained a little of the advantage, but when prices fell the wages of the men were of course reduced. The owners have now discovered that they are able to obtain better prices by acting practically in concert, although there is no trust, and have no objection to paying better wages when they know that the cost of producing the coal bears a fixed relation to its selling price; therefore the increase of wages does not fall upon them.

In South Wales, in the coal-mining industry, the union has raised little objection, if any, to the use of labor-saving machinery, but then it should be added that practically no attempt has been made to substitute machinery for manual process. The effect of unionism has not been to make the men loiter over their work, or to induce them to do as little as possible for the wages they receive.

There is a very human disposition on the part of the collier, not unknown in other walks of life, to take life easier as income improves, but, except in a few cases—such as where men are on day work prior to the fixing of the cutting price in a new colliery or seam, and have limited the output with a view to influencing a settlement—I have never known it to take the form of what may be called "ca' canny," though very possibly the man who works exceptionally hard and remains long hours may not be regarded with the most friendly eye by the less energetic man in the neighboring stall, who might look upon it as bad form and express himself accordingly. The effect of

the general disposition to take things more easily in good times can not be measured statistically because the output per individual in periods of depression is necessarily diminished by the stoppage of the colliery from want of trade.

Of recent years perhaps more friction has existed between London compositors and their employers than in any other industry. The employers bitterly complain of the tyranny of the men and the attempts they have continually made to prevent the introduction of typesetting machines. When finally the men were forced to yield to the march of improvement and found that they could not continue to set up newspapers and certain kinds of book work by the antiquated method of hand composition, they deprived the employer of the economy of machinery by restricting output and imposing arbitrary, tyrannical, and foolish regulations governing the use of machines.

Many of the largest printers in London, including several of the most prominent daily newspapers, are members of the Master Printers' Association, of which Maj. Vane Stow is the secretary. Talking about the relations between employers and men, Major Stow gave it as his opinion that in the past the trade union was possibly a beneficial institution as it relieved the worker from the tyranny of the employer, but such tyranny never existed in the printing trade, and until a few years ago the relations between employers and men were friendly, as it was not often that the power possessed by either side was abused. Of recent years it has been noticed that the printers' union has been managed on different lines; its members have manifested a tyrannical disposition, and the union is constantly making new demands and seeking fresh interpretations of agreements or rules that have been accepted by both sides.

Major Stow complained of the injury that the union has done in restricting output and in compelling employers to make use of a larger number of men than is actually necessary or would be required if the men were permitted to obtain the full output from their machines. Like many other men who discuss the labor question from the standpoint of capital and the employer, Major Stow believes that the effect of the trade union has been to destroy incentive among the men, and that unionism offers no inducement to the best and most competent workman to work up to his full power. On the other hand, he admits that the union has been of benefit in that it has substituted collective for individual bargaining, and collective bargaining he regards as an advance over individual negotiation, as it enables the two sides to meet each other through representative bodies. Asked the direct question whether, in his opinion, employers as a rule would abolish the union if they had the power to do so, Major Stow said he would not like to answer the question because so much would depend on individual employers, but even if the union were abolished, he thought it would

be necessary for something to be substituted in its place for the convenience of having collective rather than individual bargaining.

One of the oldest and most influential newspapers in London is the *Morning Post*, of which Lord Glenesk is the sole proprietor. At the time when Lord Glenesk became its owner the paper was neither as influential nor as profitable as it is to-day, but animated by a spirit of benevolence and wise liberality in trying to make the relations between himself and his employees as friendly as possible, he unionized the composing room. Lord Glenesk voices the feeling of many employers in England, and especially those employers who have to deal with printers. He says he has no hostility to the union or unionism in general; on the contrary, he would do everything in his power to encourage the union if the union would confine itself to its legitimate functions. It is because the union often attempts to interfere with matters with which it has no concern, and to restrict and hamper business operations, that employers are frequently forced to regard the union as inimical not only to the interests of the employer but also to the best interests of the men. Despite the efforts of a just and liberal employer to treat his men properly, on the part of the unions there are a number of small things that constantly arise which in the aggregate spell hostility. What an employer objects to perhaps more than anything else is that, although the relations existing between himself and his men may be of the most satisfactory character, the men will go out on a strike in sympathy with other men employed in quite another line of trade.

Lord Glenesk points out that labor makes the mistake of believing that it is capital, while, as a matter of fact, it is nothing of the kind, and it becomes capital only when the product of labor is turned into money. Labor is not capital, and for labor to consider itself capital leads to a confusion of ideas and involves the correct functions of both.

Lord Glenesk takes issue with the trade-union leaders that the present improved condition of the British workman in the matter of higher wages and reduced hours is the result of unionism. He ascribes this better state of affairs to the general prosperity not only of Great Britain, but also of the world at large; to the fact that the world is incomparably richer to-day than it was half a century ago, which has been brought about by the advancement of science and improvement in the mechanical arts, and because the various countries of the world are no longer detached and isolated, but, by steam, cable, telegraph, and other means of communication, are brought into close contact. This has enormously increased the general wealth and the general welfare, and in that wealth the workingman has shared, as has everybody else, and he lives better to-day precisely as do all other classes, because science and the march of improvement have made that possible.

Instead of having helped British industry, in the opinion of Lord

Glenesk, the unions have hampered it, because of the unnecessary restrictions which they have placed upon employers in their opposition to the introduction of machinery. This has been especially so in the case of the printers, who, by every means in their power, opposed the introduction of typesetting machines, and when finally they were forced to yield they still prevented the full benefit to be derived from the use of the machines by imposing restrictions which obstructed their full output, or required that an unnecessary number of men should be employed in their manipulation. Lord Glenesk also believes that the result of trade unionism has been to reduce the worker to a dead level instead of affording the intelligent or ambitious man the opportunity to rise. An army in motion, to use his simile, moves at the pace of its slowest unit, because it has to make progress as a compact organization. It is the same with the trade union. There is a certain pace set, and that pace is the pace not of the fastest but of the slowest, the result being that the man who could move faster is prevented by the rules of his union from exceeding the pace of the slowest, or least intelligent, or least capable, of the army of workers. "I can only repeat," Lord Glenesk added in conclusion, "that while I am not hostile to the union so long as it does anything to improve the condition of the men and better the relations between them and their employers, I object to it only when the union departs from its proper field and attempts to invade the domain of the employer. If instead of doing that the unions would, for instance, teach their members how to cook, if it would take some of them to France and let the British workman see how much better the French workman lives on less money, I think it would do an immense amount of good."

For twenty years Mr. J. W. Shackleton, at the present time member of Parliament for Clitheroe, Lancashire, was a weaver in the cotton mills, and for ten years prior to his election to Parliament was the secretary of the Darwen Weavers' Association of Lancashire, and is now the vice-president of the Northern Counties Amalgamated Weavers' Association, with a membership of 90,000 men, women, and "young persons," all of whom work in the cotton textile trade.

In Lancashire in the cotton trade there is a joint committee composed of operators and employers whose functions are to settle all questions relating to wages and the conditions of labor. There is also a body known as the Textile Association, which includes in its membership all of the various textile societies embracing the different branches of the trade—cotton spinners, cardroom workers, overlookers (fixers, in America), weavers, twistors, drawers, and bleachers. This association deals solely with legislative matters, that is, all questions coming before Parliament, but not with trade disputes. The employers have a similar organization called the Employers' Parliamentary Council, and as occasion demands it these two bodies meet for discussion and agreement,

The creation of these two organizations, representing both employers and employees, Mr. Shackleton regards as an excellent arrangement, and he thinks they have on many occasions prevented strife and averted war. He points out that properly speaking they are boards of conciliation and not of arbitration; their function is to try to harmonize difficulties when they exist; but, of course, if all other means have been exhausted and an agreement is not reached there is only one resource left, that is, to fight in the usual way by means of a strike.

The Northern Counties Amalgamated Weavers' Association is the central body. Each town in the Lancashire cotton district has its local union, which, to all intents and purposes, is autonomous and is governed by a committee elected by the men, members of that union. Anybody working in the trade is eligible to membership. The scale of prices governing the trade is fixed by joint agreement between committees of employers and the Northern Counties Amalgamated Weavers' Association, and that list governs prices in all branches of the cotton weaving or manufacturing departments; the scale continuing for an indefinite period, but subject to change at any time by mutual consent, or if no common basis of agreement can be reached both sides have the alternative in the usual way, that is, by a lockout on the part of the employers or a strike on the part of the employees. It should be noted, however, that the scale under which the men are now working went into effect in 1892, and since then there has been only one modification, which was an advance of 2½ per cent to the operatives in 1898. It will therefore be seen that there has been a long period of peace in the Lancashire cotton trade. Other branches of the trade, spinners, carders, and so forth, are working under similar agreements.

The general position assumed by the Weavers' Association, as stated by Mr. Shackleton, is that neither operatives nor employers have the right materially to modify this scale without giving an opportunity to the joint committee to adjust the matter. All questions affecting the trade are discussed once a month at a council meeting held in various parts of Lancashire, but which sits usually in Manchester, as being the most central point. This council is composed of one representative for every 1,000 members. There is a central committee consisting of 11 members elected by ballot by the central council; its members hold office for twelve months, one-half of the council retiring every six months, but eligible for reelection.

It has been stated that the local societies or unions enjoy an autonomous form of government. This liberty of action extends to the fixing of the rate scale, the scale not being uniform in all districts, but being governed by local and other conditions. The local societies also pay the local benefits in case of sickness or other causes, and have in some cases sanctioned local strikes, but such a strike is ultra vires

unless it has been passed upon and received the approval of the central body. The policy of the central body is to stand aloof and not to interfere unless its aid is evoked by one or both of the contestants. In that case it intervenes, but it never tenders the exercise of its good offices unless they have been sought.

Mr. Shackleton has no hesitation in saying that the union has been of the greatest possible benefit to the men, and also of great benefit to the employers. It has helped the men because the union has become an effective power and that power can be enforced if necessary; it has been of advantage to the employers, because it has provided a means for both sides to get together, and the fact that the employers meet the men through the joint committee proves this. If it had not been for the unions, in the belief of Mr. Shackleton, wages would have had a tendency to go down rather than to have advanced, as individual employers would have taken advantage of the necessities of their men, and would have reduced wages, which would have led to all employers doing the same thing. The union has been the means of reducing the hours of labor, which has been done by organized effort, and which has resulted in all men engaged in the trade, whether union or non-union, receiving the same benefits. Here, as in many other trades, union and nonunion men work side by side, although the union men naturally try to make converts of the nonunion men to the doctrine and principles of unionism.

The condition of workers in the textile trade has been improved to the extent that unionism, Mr. Shackleton asserts, has raised the general standard. The union has not restricted the use of labor-saving machinery; but, to use his words, "we believe that whenever labor-saving machinery is employed, which means an increase in profits to the employer, we should obtain our share, whatever it may be, either by receiving better wages or by a reduction of hours. In other words, we do not regard it as fair that the workingman, by the use of machinery, should be exploited solely for the benefit of the employer. Only to that extent can it be fairly said that any objection has been raised to the use of any form of machinery; and wherever its introduction has been followed by the men profiting in some degree with the profit of the employer no objection has been made."

In 1897 some of the largest employers of labor in the United Kingdom formed the Labor Protection Association, which was primarily intended to enable a scientific study to be made of the causes relating to trade disputes generally, but which shortly after its organization, and since then, materially widened the scope of its action. Not long after its formation the great strike of the engineers occurred and the association supplied nonunion men to those firms which were at war with the union, and also took measures to furnish police protection for the nonunion labor. In 1898 there was formed the Employers' Parlia-

mentary Council, organized for the purpose of watching legislation affecting employers. The two associations are separate bodies, but they work in unison and many members are members of both.

Mr. F. W. Read, the assistant secretary of both the Labor Protection Association and the Employers' Parliamentary Council, speaking in his official capacity, gave the views of these great representative bodies of employers regarding the trade unions. He says:

The unions have undoubtedly certain useful functions, and no employer objects to the union so long as it confines itself to those functions that are useful and legitimate, but what the employer does object to is the union exercising its power to restrict output; to interfere with the proper conduct of business, and especially to interfere with men who do not belong to the union, who do not want to belong to it, but who, owing to this interference and coercion, are made to join it. Without doubt the unions have been an injury to British industry by restricting output, by imposing unnecessary regulations, and by trying to prevent the introduction of labor-saving and other machinery. It is quite impossible to point to any documentary evidence that would sustain these allegations, but we consider that the fact has been clearly established by the conduct of men in union workshops; and when, as has sometimes happened, the union men in those shops have been displaced by nonunion men, the gain has been shown by a large increase of the output.

It has been frequently asserted by union men that the union has been of great benefit because it has led to the substitution of collective for individual bargaining, and if collective bargaining is a good thing, then the unions have served a useful purpose. But we deny that it has been for the real advantage of the men, and we contend that it has had the effect of depressing the best worker to the level of the worst; and it has been especially bad for the good man who, left to himself, would have gone ahead, but who, under the restrictive rules of the union, becomes of no greater value than the least effective workman. It must be admitted, however, that the unions have been of advantage to the men on what may be termed the provident side—that is, in enabling them to save and to make a provision for sickness and old age.

It is also claimed by the unions as one of the things to justify their existence that, largely owing to their efforts, there has been an increase of wages and a decrease of hours. This I hold not to be due to the unions, but to purely economic causes. The general increase of wages may be traced to the general increased wealth of the country and the world at large, and also to the rise of the standard of comfort. It is significant that the increase of wages is greater among unorganized labor than with organized, and possibly in no class has the increase been so large as among domestic servants, who of course are totally unorganized.

In my opinion it would be better for trade at large if there were no unions, and yet I can not say that all employers would abolish the unions if they had the power to do so. Some of them would not, because they believe that it is more advantageous for them as employers to treat with the unions as the representatives of the great body of workers than for them to deal with individuals.

Referring to the Taff Vale decision and its effect upon unions and union labor generally, Mr. Read advanced the opinion that it would have the tendency to keep in check what employers regard as the worst features of trade unionism and make the leaders more cautious; that in the future, when a strike occurs, the unions would be careful to conduct the strike so that no legal rights would be infringed. It would not be fair, Mr. Read continued, to bring the charge that union leaders have in the case of a strike encouraged violence or other illegal methods, but it is fair to say that in the past, knowing that the worst that could happen to them would be the conviction of a few men for violence or intimidation, for which the punishment would be merely a short term of imprisonment, they were indifferent to the conduct of some of the members. But now that it is known that the funds of the unions can be seized and be made to pay for the injury and damage done, everybody connected with the union, the officers as well as the youngest member, for self-protection, will be more cautious and will be less inclined to do anything which may subject the union as a whole to pecuniary responsibility.

"I think it should also be said," Mr. Read added, "that the relations existing between employers and men are better to-day than they were in the past, and that the larger and best organized unions want to adopt methods of conciliation, and endeavor to avoid strikes."

The shipping trade has been one of the most important industries of Great Britain in which, up to a few years ago, disputes between masters and men were of frequent occurrence, and carried on with great bitterness on both sides, frequently being attended by scenes of violence, destruction to property, and bodily injury. In talking of the shipping industry it should be understood that this term means, in Great Britain, not only the crews of ships, but also the stevedores and dockers in London and in the other great ports of the Kingdom. A disagreement between a ship owner and his crew might, and frequently did, involve the stevedores and dock laborers, who had no direct interest in the question at issue, but who made the cause their own. And conversely, sometimes a trivial dispute about the employment of a few dock laborers might result in tying up shipping and in rendering useless many vessels because they were unable to load or discharge their cargoes.

To meet this condition of affairs numerous ship owners and ship owners' associations formed themselves into the Shipping Federation, which is unusual in one respect at least, as, unlike all other associations of employers, the Shipping Federation is a limited liability company, organized under the acts creating and governing limited liability companies in Great Britain, and is subject to the same legal rights, restrictions, regulations, and obligations as any other joint-stock company. The federation was organized in 1891 primarily to deal with

questions affecting labor, and it was essentially a protective association of employers, but since then its scope has been extended and its objects widened. In case of a labor dispute in which any member is involved, the federation comes to his assistance in whatever way may be necessary, by procuring for him a crew, if the difficulty is one with seamen, or by furnishing him with stevedores, if the controversy has involved that branch of labor. For the last three years the relations between ship owners and men have been improved, which members of the federation attribute to the perfection of its organization, and also to the wholesome fear which the unions have of trying conclusions with the powerful association of employers.

The secretary of the federation is Mr. Michael Brett, who explained that one of the methods employed by the federation to improve the relations between its members and their employees has been the creation of a benefit fund which gives a bonus to well-behaved seamen who live up to the terms of their agreement. Every seaman, which includes every person on board ship, who is engaged on any federation ship must register at one of the offices of the federation, these offices being found at all the principal British ports. The terms of the agreement are that the man will agree to serve on the ship for which he is engaged, whether he is a union or a nonunion man, and the federation makes no discrimination as to his connection with the union. If he serves for six months and receives a good discharge he is given "a benefit certificate," which entitles him to compensation in case of accident, the compensation ranging from 5s. (\$1.22) a week to 40s. (\$9.73) for a maximum period of thirteen weeks, according to rating, and in case of death or total disablement his representatives are entitled to from £12 10s. (\$40.83), for an Asiatic seaman, to £100 (\$486.65) for the master of a vessel over 200 tons. The holder of a certificate does not have to pay any contribution, but is required to appear personally and renew his certificate every year, or in case of his absence from the United Kingdom at the date for renewal to do so immediately upon his return. The ticket is forfeited in case of desertion, and may be suspended for various causes, but is subject to renewal for subsequent good behavior. The federation has paid out a large amount of benefit money, Mr. Brett stated, but he preferred not to give figures. The federation regards it as a hopeful sign, and indicative of the beneficial effect of the fund, that the number of certificates forfeited and suspended is constantly growing smaller.

When the federation was first organized it was bitterly fought by the unions, who claimed that its purpose was to lower wages and crush the union. This, it is asserted, is untrue. So far as wages are concerned the federation does not concern itself, as wages are subject to the standard scale adopted at the port, wages not being uniform in all ports, but varying according to circumstance. Instead of being

antagonistic to the union, as already explained, the federation does not discriminate against union men, and only demands of them that they shall be efficient and shall not try to create trouble.

The members of the federation represent the ownership of 9,000,000 tons of registered shipping. Mr. Brett does not approve of the union. He said:

At the present time the shipping trade is not suffering from trade unionism because we are able to keep it in check, but I do not think that any other employer can say the same, and if it were not for the federation the shipping business would have been paralyzed. A few years before the federation was organized conditions were so bad that an owner had no power to select his crew; he might not discharge his ship with the machinery at his command; often when he wanted to go to a particular port he was prevented. In a word, the owners were at the absolute mercy of the men, who used their power unscrupulously, tyrannically, and ignorantly. Things have changed because organization has been met with organization, and the owners are now strong enough to resist the men.

During the last twenty years the condition of seamen has vastly improved, but that improvement has not been brought about by any particular union, or unionism in general, but is the result of general conditions. The seaman to-day has better accommodations, better food, and better treatment than he ever had.

One of the grievances of shipowners against the union is the attempt made by the union to prevent the use of labor-saving machinery, and even to-day that attempt is still made whenever the union thinks itself strong enough to be able to enforce its unreasonable demand. Here is a typical instance of union tyranny and interference. At Cork quite recently the dockers, or, as they are known in the trade, the coal porters, demanded that in discharging certain coal-laden vessels hand winches and not steam winches should be used, the use of the steam winch naturally facilitating the work and enabling a ship to be discharged more expeditiously. When the owners insisted that they would use steam winches as being a modern appliance the men struck, but as the vessels involved belonged to members of the federation, men were sent from Hull to take the place of the strikers.

So far as the union is concerned we do not care in the least whether it exists or not, nor do we fear it. We would encourage the union if it looked after its members or elevated them or improved their condition in any way, and did not interfere with our business; but this last it will do, while the things it ought to do it will not do.

In some respects the functions of the British Board of Trade correspond with those of the United States Department of Commerce and Labor, the English centralized system of government, however, placing in the hands of the Government complete authority, flowing out of the power granted by act of Parliament, over the entire United Kingdom. The Board of Trade is intrusted with the collection and dissemination of statistical and other valuable information relating to trade and industrial movements and such other data as bear upon the relations between employers and employees, its functions being sim-

ilar in some respects to the work performed by the Bureau of Labor of the Department of Commerce and Labor.

Mr. John Burnett is the chief labor correspondent of the Board of Trade, a title which is a misnomer and conveys a wrong impression of Mr. Burnett's duties, as it suggests that he corresponds with the Board of Trade, while as a matter of fact, instead of being a correspondent he more nearly approaches an editor, and in the United States would be known as the chief of a bureau. Mr. Burnett, before entering the Government service, was a workingman and a member of the Amalgamated Society of Engineers. His views, therefore, on the labor question are of additional value, because he knows the question not only as surveyed from the standpoint of labor, but also as viewed from the more judicial and impartial standpoint of a Government official, whose duties have been for a number of years past to deal scientifically with the many complex problems involved.

Mr. Burnett gave it as his opinion that the effect of trade unionism clearly had the tendency to raise wages, part of that increase being due to the law of supply and demand, but one of the most important causes being the union. It had also reduced the hours of labor. To the trade union must be awarded the credit for the beginning of the movement to make strikes less frequent and to have legislation adopted which would make it possible to reach a settlement of a dispute when it occurs. Whether the trade union has made the men strive to do better work is a somewhat difficult question to answer offhand, but, generally speaking, Mr. Burnett is inclined to say yes, because the rules of most of the unions provide that men shall not be admitted to membership unless they are competent workmen, and this rule is generally enforced. Men who are not competent are liable to discharge, which may lead to a conflict between the union and the employer, and therefore, as a matter of self-protection, the members of a union exercise some method of selection. Another important influence of the trade union has been the providing of means whereby negotiations between employers and men have been carried on between their representatives, instead of between individuals, which has naturally, and as the next step, led up to boards of conciliation and arbitration, which are of enormous benefit to everybody concerned, and which would have been absolutely impossible without organization. The substitution of collective for individual bargaining must also be looked upon as a great social advance. Mr. Burnett said:

It would seem to me that the trade union has tended to develop the men's sense of duty and responsibility to their employers; it has done much to inculcate temperance, because when a man loses his place through drunkenness he forfeits his benefits, and it has encouraged thrift by helping the men to borrow money from the building societies and in other ways encouraging them to save.

Generally speaking, I believe that the trade union has improved the relations between capital and labor. It would be somewhat difficult to say whether trade unionism has hampered industry, but speaking broadly for the larger and best conducted unions, I think they do not place obstructions in the way of the use of labor-saving machinery, although there may have been a tendency to restrict output. I think it can be said without much question that if it were not for the trade union the condition of workmen generally would not be so good as it now is, because the union has not only been the means of securing better wages and shorter hours, but it has also promoted legislation which has been of great good for the great body of workers, and especially in behalf of women and children. While it must be admitted that many employers are opposed to the union, it is also a fact that many of them are equally favorable to it, because it provides a more convenient and better method whereby employers and men can settle their differences.

What the State legislature is to the State in the United States the union is to its particular trade in England; and broadly speaking the General Federation of Trade Unions bears the same relation to the separate and independent unions that the Congress does to the United States at large. The General Federation of Trade Unions came into existence four years ago because trade-unionists realized the necessity of a better and more systematic financial scheme for the general welfare of unionists when financial assistance became necessary. Just as every State of the American Union is sovereign and independent within its own borders, but has delegated certain powers to the Federal Government for the good of the entire body politic, so the General Federation possesses powers which can be exercised only by the federation itself. The General Federation has a membership of 420,000. Every union a member of the General Federation pays a contribution of 2s. (49 cents) per member per annum, who receives when on strike a benefit of 5s. (\$1.22) per week. The union may reduce the per capita contribution one-half and the members receive a correspondingly reduced benefit.

In explaining the object and purpose of the federation, Mr. Isaac Mitchell, its general secretary, stated that one of the most important ends sought to be accomplished by the federation is to prevent trade disputes and eliminate friction between employers and employees, and where, unfortunately, differences arise, to try to bring the contending parties together. If after investigation and every attempt to seek a reconciliation fails and the federation, through its executive committee, becomes convinced that the men are in the right and are justified in their demand, they are given financial support; but if it is the opinion of the committee that the justification does not exist, then no such support is extended. In the four years since the federation came into existence it had twelve times refused to give financial help when it had been asked and in numerous other cases it had prevented a rupture.

Recently at Wolverhampton there was a dispute in the lock trade which threatened a strike. Owing to the mediation of the federation a wages board was constituted which resulted in an amicable understanding. Mr. Mitchell said:

Our policy has been to obtain the confidence of employers no less than that of the men by taking a strictly impartial attitude in our investigations and making both sides understand that we are more desirous of justice and lasting benefits than mere temporary advantages gained through the use of arbitrary power.

The affairs of the federation are controlled by a management committee of 15 members, elected annually by the council. The council is composed of delegates representing the various unions, a union with a membership of not exceeding 10,000 being entitled to one delegate; exceeding 10,000 and not exceeding 25,000, two delegates; exceeding 25,000 and not exceeding 50,000, three delegates, and all over 50,000, four delegates.

The federation has no power to take the initiative in ordering a strike, but when the council of the federation sanctions a dispute the union involved is entitled to benefits. After a dispute has lasted 12 weeks, or sooner if considered necessary, the management committee of the federation has power to investigate it, and if it is deemed that no good can result from its further continuation, benefits can be suspended after 14 days' notice. No union is entitled to benefits from the federation unless it has been 12 months a member of the federation and has paid 12 months' contributions.

The federation is opposed to the sympathetic strike, because it does not believe in the wisdom of men belonging to one trade striking to redress the grievance of another trade. "The federation has acted as a restraining influence, and a balance wheel," says Mr. Mitchell. "It is no use disguising the fact that there have been many unreasonable strikes, caused often by the men getting excited and rushing their executives, who allow their members to get out of hand, and who yield when they ought to be firm. In such cases when the executives say to the men that the federation will not approve the strike, which means that they will not receive any help from us, it makes the men hesitate and think very seriously whether it will be advisable for them to strike against our consent. In that way the federation stiffens the backbone of the union leaders and stands in the way of hasty action."

During the course of the interview, Mr. Maddison, the treasurer of the federation, took part in the conversation. Both Mr. Mitchell and Mr. Maddison attribute the present improved status of the workmen to the influence of the union. In proof of this Mr. Maddison pointed out that forty-five years ago the journeyman iron founder of Yorkshire received 23s. 6d. (\$5.72) a week as against 38s. 6d. (\$9.37) now

paid to him. "Our contention is this," said Mr. Mitchell. "If it were not for the union any reduction made by any individual employer for any cause whatever, which might be brought about in some cases by lack of intelligence on the part of the employer to manage his business with as much skill as that of his rivals, results in that reduction falling on the great mass of workers. Our contention further is that the workingmen of this country are, as a rule, paid not according to their skill, the arduousness of their work, or the risks incurred, but according to the way in which they are organized; in other words, that to secure better wages and better conditions generally they must make of themselves an organized force."

"Here is an instance of this," Mr. Maddison added. "In South Wales our craftsmen (iron founders) are paid 16s. [\$3.89] a week as against £2 [\$9.73] in London. The same skill and the same labor is required in both places, but in South Wales the men are not organized, while in London they are, which explains why they are able to obtain in London more than twice the wages paid in South Wales."

Referring to the present condition of wage-workers generally as compared with the conditions that prevailed in England half a century ago, and everybody admits that the condition of the workman has been immensely improved during that time, Mr. Mitchell advanced the opinion that this improvement had been brought about more largely by the educational work and militant propaganda of the unions than by any other cause. He admits that the early factory acts, and especially the legislation which Lord Shaftesbury succeeded in placing upon the statute book, was purely humanitarian and dictated by philanthropic and lofty motives, this legislation having been enacted before the trade unions acquired their power or became a factor in social or economic affairs; but for the last thirty years whatever the workingmen have gained they have won by fighting for it, and they could not have fought successfully had they not been organized. The new condition of affairs dates from about 1867. It was then that the trade union, according to Mr. Mitchell, began to be a force, and from that time on its strength has steadily increased.

The charge so frequently made by the opponents of trade unionism that the unionist opposes the introduction of labor-saving machinery is stoutly challenged by Mr. Mitchell, who denies the justice of the charge, but admits, as do other unionists, that men object to the use of machinery if thereby it lowers the standard of the workers or substitutes unskilled for skilled labor. If, for instance, there can be put into a factory a machine which will displace four or five men and can be operated by a growing lad, who with his machine can do the work formerly done by these four or five men, unionists will object to the use of such machine, because they believe its use is not good for the men, the country at large, or the growing lad. The lad may be

paid more than he would otherwise earn, but because he will become simply a part of the machine itself the effect will be to stunt him both mentally and physically. Experience, Mr. Mitchell says, proves that nothing is so devitalizing and demoralizing as to place a young person in charge of a machine. Far less injury is done in the case of a man who has reached his full growth and whose mind is formed. Therefore, in such a case where the introduction of machinery would lower the general standard men would properly object to its use. In short, the working man to-day will not permit himself to be exploited simply for the benefit and profit of his employer, and Mr. Mitchell adds:

It has, of course, frequently been said that the trade unions have imposed upon employers unwarranted and foolish restrictions, which have hampered the conduct of business, and in some cases made it so costly that foreign competitors have profited thereby. Our answer is that whenever restrictions have been imposed they have been forced upon us by the action of unscrupulous employers who have compelled their men in self-defense to adopt protective measures. The fixing of hours of labor and the work to be done was the natural corollary of the adoption by employers of what is known as "blood money." Employers, in the hope of getting an undue amount of work out of their men, have privately offered a particular man 5s. [\$1.22] or 10s. [\$2.43] a week more than the regular wage in consideration of his exerting himself and thereby setting the pace for the others, and compelling them to keep up with it; but observe, those others were not paid the extra money, and therefore the employer was obtaining this extra labor for nothing. It is because of these things, and simply as a measure of self-protection, that we have been compelled to make certain regulations and to insist upon their enforcement.

I think it will be generally conceded that unionism has led to better relations between employers and men, and one of the great benefits it has conferred is that strikes are made more difficult. Disputes between employers and employees are now considered on broader and more scientific grounds than they ever were before, and with regard to all the circumstances governing the conditions of the trade. The result is that strikes become less frequent, and it is a matter of pride to unionists to know that there are fewer strikes in the organized trades than there are in the unorganized.

Interesting in this connection, as showing that in the best and most highly organized unions the efforts of the executives are continually directed against the use of a strike except when all other means have failed, attention may be called to a difference of policy existing in the Amalgamated Society of Engineers at a time when this investigation was made. The engineers working in the Glasgow district refused to accept a reduction in their wages of 1s. (24 cents) per week, and determined rather than to submit to this reduction to go on strike. The local unions indorsed this action and submitted it to the executive council in London, which refused to give its approval. Notwithstanding this veto, and also that the general federation opposed the

strike, the men ceased work and remained idle for two weeks, during which time they were paid strike benefits of 10s. (\$2.43) a week, and at the expiration of two weeks returned to work at the reduction of 1s. (24 cents) a week in their wages. Inasmuch as the strike money had been paid out of the funds of the local branch of the Amalgamated Society without the consent of the executive council, and therefore was an unconstitutional payment and in violation of the society's rules, the executive council directed that every member who had received £1 (\$4.87) in benefits should refund that amount to the treasury.

Mr. Mitchell was asked whether, in his opinion, the employers would abolish the unions if they had the power to do so, and he replied that he believed they would. "I do not think," he added, "that the employers love us any too well, but they simply tolerate us because they have no other alternative and also, perhaps, because they regard us as the least of the two evils."

Mr. Mitchell worked in the Quintard Iron Works in New York ten years ago. He was well satisfied with living in America and but for family reasons would have remained there. Contrary to the opinion expressed by Mr. Barnes, he believes that the general condition of the American workingman is superior to that of the British.

One of the largest employers of labor in the United Kingdom, who has an intimate knowledge of the great transportation interests of Great Britain, frankly stated that it was the prevailing opinion among a majority of employers, and especially those engaged in the management of railways, that the union was a dangerous and disastrous thing; that it was in the interests of employers to prevent the men from joining the unions, and believing this, employers fought the unions whenever it was politic to do so. He continued:

One hears a great deal of humbug these days about the identity of interests between employer and employee, and it is the stock theme of demagogues in and out of Parliament, in board rooms as well as in lodges, that employer and employee are members of one family, and that both have the same end in view. This is rank nonsense. The interests of capital and labor, instead of being identical, are antagonistic, and naturally almost must be so. I, an employer of labor, and the trustee of the persons who have invested their money in the business which they have placed in my hands to manage, desire to buy my labor for as little as possible, precisely as it is my object to buy everything else that enters into the cost of production at the lowest possible price in the market. The workman who has something to sell—that is, his time, because that is the only thing the workman has to sell—desires to obtain for that commodity the highest possible price that he can secure for it, and in that respect he does not differ in the least from the seller of any commodity. Therefore I am trying to pay as little as possible, and neither side will yield to the other except under duress. If I propose to pay 25s. a week and I am forced by the union to pay 30s., I pay it not because I do it gladly but because I must either pay or fight and take the hazard of war. That in a word is the

relation to-day between employer and employee. Now, the union has this effect. Feeling the support of a union behind them, the men are more ready to adopt extreme measures when they try to secure higher wages or when any difference of opinion rises between them and their employers. Men who are not in a union are more cautious about a strike, more amenable to reason, more willing generally to live in peace, more reluctant to take offense at a trifle and throw down their tools. The union has done such wonderful things for the men. Bosh! I tell you what the union is to-day. It is a means of providing a few men with excellent places as officers in the unions, who are paid three or four times as much as they could earn in any other way under the most favorable circumstances, and who have about one-third as little work to do. That is modern trade unionism.

Extremely interesting in contrast to this opinion is that of Mr. George S. Gibb, general manager of the North Eastern Railway Company, one of the largest and most important railway systems in the country, which has on its pay rolls more than 46,000 men. Mr. Gibb advanced it as his opinion that it is a fact to be recognized that the trade unions have been to a very large degree the means of obtaining for their members higher wages; and while an unwise labor leader might be the means of working untold mischief, just as an unwise manager or employer of labor might do an equal amount of harm, the right of the men to combine and form themselves into unions must be admitted and accepted. Mr. Gibb has always been in favor of employers frankly recognizing the unions, because he considers it just that the men should have the advantage in their negotiations with an employer of being represented by a skilled agent, exactly as the employer is; and the men can obtain the benefit of this skill and knowledge only by means of the union. If the unwise or dishonest labor leader is eliminated, which eliminates the danger always to be feared from such a man, it is for the interest of the employer, Mr. Gibb holds, to deal with the union as the representative of the workers as a body rather than to try to deal with an assemblage of excited men, many of whom are unpractical and undisciplined. The labor leader who is fit for his place, as most of the present leaders are, has usually given considerable study to the questions involved, and he knows trade conditions almost as well as does the employer. He knows, too, when the union can press for an advance of wages or a reduction of hours and stand a reasonable hope of securing its demand, and when it would be foolish to do so. Mr. Gibb says that in the management of his company's affairs he recognizes the union and corresponds with its officers as freely and frankly as he does with anybody else. He does not, of course, allow any interference by union men or anybody else with matters of discipline or the conduct of the company's business, but he is ready at all times to discuss with them any questions which are properly subjects of discussion between employers and men. In the employment of men

there is no discrimination between unionists and nonunionists, and, roughly speaking, the men in the company's employ are about evenly divided between the two classes. Neither class has any advantage in freedom of access to him or to the other officials, and whenever any question arises that ought to be discussed its consideration is readily obtained. The relations between the company and its men are very satisfactory, and since 1897 there has been no strike or any serious disagreement. In 1897 a question arose regarding hours and wages, and, as it was impossible for an agreement to be reached, the matter was referred to Lord James, of Hereford, one of the lord justices of appeal, for his decision. Mr. Bell, the general secretary of the Amalgamated Society of Railway Servants, represented the interests of the men, and Mr. Gibb those of the company, and Lord James, after the case was fully presented to him, delivered his decision, which was a compromise, and was accepted by both sides. Two years later a further question arose affecting hours and wages, which was settled between Mr. Bell and Mr. Gibb without reference to an arbitrator.

The North Eastern Company builds its own engines, passenger coaches, and freight cars. Both in the shops and in working the road Mr. Gibb has not noticed any objection on the part of union men to the introduction of machinery or labor-saving devices. Whenever machines are introduced, however, there is a tendency among the employees, he says, to try to force the employment of a larger number of men.

Mr. Gibb regards with favor boards of conciliation and other conciliatory methods, but owing to the satisfactory relations that exist between himself and his employees the North Eastern system has not felt the necessity for introducing anything of the kind.

The Engineering Magazine is recognized, both by employers and employees, as one of the leading authorities in England, not only on subjects pertaining strictly to engineering, but also on problems affecting the general relations between capital and labor. The editors are practical men, whose long experience and intimate knowledge of the complex questions governing industry, fortified by numerous impartial articles which have been written for their magazine by representative men on both sides, entitle their opinions to be heard with the greatest respect. In their belief unionism has unquestionably been beneficial to both employers and employees. It has been beneficial to the men because it has enabled them to obtain better wages and shorter hours; it has been equally beneficial to employers because it has raised the general standard of work and has led to better relations between them and their men. As to the great question whether labor unions have done anything to hamper the use of the latest and most improved machinery, the evidence of these gentlemen is that when the unions were younger, not so well organized, and not so intelligently con-

ducted, this opposition made itself very manifest. At the present time, speaking generally, intelligent men are at the head of union affairs, and these men realize that it is folly to fight progress in any form, and instead of antagonizing machinery or anything else that will cheapen the cost of production or improve or increase the product, they try to make their associates understand that it is for the best interests of all to facilitate rather than to obstruct the march of improvement.

The editors also called attention to a sociological phase of the labor question in England, which is worthy of mention. In England the influence of the patriarchal system is still felt in the relations between employers and men, and at times there is found a man working in the same factory in which his father worked, the father having worked for the father of the present proprietor. Such cases, however, are becoming less frequent owing to the constantly increasing tendency in all modern commercial enterprises of magnitude to convert the private copartnership into the limited liability company, in which the personal proprietor is replaced by a board of directors or a managing committee. In those cases the directorate does not come into immediate contact with the men and does not have the personal acquaintance with them that used to exist when important enterprises, hereditary in certain families, were handed down from father to son, and when the head of the firm for the time being felt a pride in knowing his men by name and regarded it as his duty to take an interest in them and their families.

It is the opinion of the editors that there is more migration among journeymen in the United States than is to be found in England. In America a certain number of workers appear to take a delight in wandering from place to place, especially if there are no strong home ties or attachments. This is notably true of the printing trade. To a less extent is this found in Great Britain, and men, as a rule, do not leave a place of employment unless compelled to leave it by the stress of circumstances. In England there is an aristocracy of labor and caste. The Londoner born and bred, who has worked all his life in London, regards it as lowering himself in the social scale to work in a smaller place even at better wages, and will not voluntarily do so, except in a few of the large centers, such as Liverpool, Manchester, Birmingham, and Sheffield.

Among many interesting contributions to the pages of the Engineering Magazine on the subject under investigation, short extracts are made from three articles. Mr. Percy Longmuir, a worker in steel, iron, and brass, writes in the number for January, 1902:

"The dominating policy of trades unionism has undoubtedly restricted the expansion of British trade," but he claims that in addition to the restrictive union policy some of the responsibilities must

be laid at the door of the employer, as there is much room in Great Britain for improvement in commercial methods and in the education of employer, workman, and merchant.

An equally interesting article is contributed by Mr. T. Good in the August, 1902, number on "Some unacknowledged conditions in British workshops." Mr. Good is a self-educated galvanizer in business on his own account. "That this 'ca' canny' policy is in extensive operation in many industries," he says, "that it has a demoralizing influence upon workmen, and that it materially affects the larger problem of foreign competition I freely admit," but he claims that under present conditions a clever workman is in too many cases valued by his employer no higher than a bad one. The consequence is that under the system, "men lose all incentive to put forth their best energies, and honest work and genuine ability are placed at a discount. It is a sorry admission, but I must say that my varied experience has convinced me beyond the shadow of a doubt that honest workmanship seldom pays." In short, Mr. Good's indictment brought against employers as a whole is that if the workman would succeed and keep his place he must—by a system of "tips" and "treats"—in other words, bribery—"stand in" with the foreman that he may be favored with the cleanest and most comfortable job, keep his place when others are dismissed and demand slackens, and be singled out for promotion.

Sir Benjamin C. Brown, D. C. L., one of the great builders of machinery in England, writes:

I have always held, and I believe most fair-minded employers and workmen hold, that the best position for negotiations to be carried on between capital and labor is that of absolute equality, and that neither side ought to wish to have any advantage over the other; and if all questions could be settled on the basis of justice, fair play, and the general good of the trade, it is quite clear the questions as to which was stronger would not be of any importance, or enter at all into the calculations of either side. It is only because of the possibility of an appeal to brute force that these things have to be borne in mind.

Of course one great point is to make up our minds whether we think it better there should be trades unions or not. My own feeling has long been that large unions, both of workmen and employers, are by far the most satisfactory. All disputes, then, before they can lead to stoppages of work are taken away from the original disputants, and are brought before selected employers and workmen of knowledge and experience in dealing with such matters, men who know each other well personally, and who have usually established a friendly and to a great extent confidential footing with each other, and numbers of disputes which would lead to a stoppage of work, if they had to be settled between an employer and workmen in the works, get smoothed and settled amicably by the time they reach the last court of appeal.

To refer to those who suppose unions are an evil, I think they take as an ideal some self-reliant workman, who has a very strong character, great self-confidence, who can make his own bargains, and then they say, if all men were like that, how nice it would be. But they

must know that all men are not like that. People who can take the lead and act entirely on their own self-reliance are very scarce in every relation of life, and what used to happen much more before unions were so strong was, that suddenly a feeling would arise among a body of workmen that they were dissatisfied or offended, and that they ought either to have a large rise in wages or something else. A mass meeting would be called by the most violent of them, and the most extreme would force themselves to the front, the delegates would be elected by clamor and then come as the representatives of the whole party of the workmen, saying they must have the most unreasonable concession or they would go on strike, and take such course as a wise trade-union leader would never adopt. I think anyone who has known the labor market for the last thirty years will say that the demands are almost without exception far more moderate in their character than they used to be before the men were so much under the influence of the unions.

Sir William Mather, M. P., senior partner in a great North of England engineering firm, says of the influence of trade unionism on British industry:

We employers owe more than, as a body, we are inclined to admit to the improvements in our methods of manufacture, due to the firmness and independence of trade combinations. Our industrial steadiness and enterprise are the envy of the world. The energy and pertinacity of trade unions have caused acts of Parliament to be passed which would not otherwise have been promoted by employers or politicians, all of which have tended to improve British commerce. And it is worthy of note that this improvement has gone on concurrently with great and growing competition of other nations, owing to the development of their own resources. The enormous production of wealth in Great Britain during the present half century, which is due to natural resources and the labor and skill bestowed upon their development, has grown most rapidly during a period remarkable for the extension of the power of trade unionism. Prosperity beyond the dreams of avarice has followed in the wake of our industrial habits and customs, and these have undoubtedly been largely promoted by the great labor organizations. Some forty acts of Parliament, affecting the rules and customs of almost every occupation, have been promoted, and mainly supported or extended, by the influence of trade unions during the last fifty years. Some deal with the safety and health of the laboring classes as a whole while in the pursuit of their work. Others protect women and children from oppression or conditions of employment unsuited to their sex or age. Many of them tended to promote improved appliances in all industries whereby labor is less of a drudgery. Every intelligent employer will admit that his factory or work-shop, when equipped with all the comforts and conveniences and protective appliances prescribed by Parliament for the benefit and protection of his work people—though great effort, and it may be even, sacrifice on his part, has been made to procure them—has become a more valuable property in every sense of the word, and a profit has accrued to him, owing to the improved conditions under which his work people have produced.

One of the chief efforts of the union, Sir William Mather says, is to obtain high wages and short hours. But he maintains there is no

case on record where any union has struck or agitated for one or the other of these objects without believing that the trade could stand it, or without discrediting the statement of the employers to the contrary, and in deriding their fears that the industry by which they both lived would suffer. The belief may have been erroneous. A disastrous strike or lockout has not infrequently resulted from ignorance of facts which proved that the views of the trade union were completely mistaken. On the other hand, he maintains, strong and persistent agitation to benefit the workers has secured substantial concessions from employers without any check to the progress of the trade.

Sir William Mather also says he is not unmindful of the fact that the trade unions in their struggles to obtain good results have even used unjustifiable means, have caused much acute though temporary suffering, and have employed even brutal methods occasionally. But these mistakes and evil doings have always included among the sufferers those who so rashly entered upon a bitter and unnecessary conflict. Viewed historically, they have left no permanent evil or injury continually sapping trade, though for a time they have weakened it, while the good effected by them has passed into industrial life to strengthen it and into the laws of the country to improve them.

One of the foremost writers in England on sociological and economic questions, whose reputation is international, is Mr. Sidney Webb, a member of the London County Council. Mr. Webb says that what unionism has done for the great body of workers can be most readily seen when one compares the difference in conditions in those trades in which women are organized and those in which they are unorganized. The only trade in which an organization exists among women is among the cotton weavers and card-room hands, and one has only to see how much better is the position of those women compared with women in other trades to appreciate what they gain by the union. The conditions in Lancashire among the cotton operatives are regulated by law and collective bargaining, and that has been one of the great results of trade unionism—the substitution of collective for individual bargaining. When an employer can deal with each employee as an individual and separately he has an enormous superiority which he ought not to possess, and which enables him to obtain an advantage either in the matter of wages or hours of labor. The substitution of collectivism for individualism corrects in a measure that great wrong and brings the two sides nearer to an equality.

Mr. Webb does not hold that the effect of trade unionism has been to reduce all workers to a dead level. He maintains that they have a perfect right to establish a standard of production precisely as they have the same right to try to obtain an increase of wages. The workman has something to sell—his time and his labor—and he has a right to obtain for these whatever he can.

The foremost labor member of Parliament in England is Mr. John Burns, who has long taken a leading part in the labor struggle. He said:

So far as the labor leaders are concerned we are all strongly opposed to the restriction of production; we are all in favor of higher wages and shorter hours, which will enable men to enjoy sober and proper recreation, and above all we are in favor of better and more conscientious work. And if those things should incidentally mean a diminution in the production of cheap and nasty goods, only to that extent can it be alleged that we are in favor of a restriction of production.

Mr. Burns points to the statistics relating to changes in rates of wages and hours of labor for 1902, published by the Board of Trade, as proving the beneficent effects of trade unionism. This report shows that while 91,812 work people received advances during the year amounting to £5,326 (\$25,919) per week, or an average of 1s. 2d. (28 cents) per head, 793,041 sustained decreases amounting to £78,027 (\$379,718) per week, or an average reduction of 1s. 11½d. (48 cents) per head, and these changes, which fell heavily upon the workingman, were accomplished without serious strikes or stoppage of work, as the number of disputes was lower than that for the preceding year, hitherto the lowest on record. The report to which Mr. Burns refers says: "Changes affecting 80 per cent of the work people were arranged by conciliation, arbitration, wages boards, sliding scales, or other conciliatory agencies. This large percentage is due to the fact that the changes in the coal and iron trades, in which the most widespread changes of wages occurred in 1902, are now usually arranged by such methods." Mr. Burns also calls attention to the fact that 98.6 per cent of all the changes were made without stoppage of work, and among only 1.4 per cent of the whole number of work people employed were changes effected after work had ceased. Mr. Burns maintains that the influence of trade unionism is steadily exerted against strikes and in favor of accepting lower wages when it is proved that the employer is justified in making a reduction, and that the whole tendency of trade unionism is directed toward maintaining the most amicable relations with the employer and at the same time properly protecting the rights of the employee.

In a paper read before the Industrial Conference, at the Crystal Palace, London, July 10, 1903, Mr. S. B. Boulton, a prominent wholesale merchant of London, chairman of the London Labor Conciliation and Arbitration Board, said:

The formation of trade unions led, in many industries, to the establishment of employers' associations, the objects of the two classes of combinations being usually antagonistic; it was only later on that the idea occurred of using these rival associations as vehicles for arriving at a mutual understanding between masters and men. The first serious attempt of reducing this idea to a practical reality appears to be due

to the initiative of Mr. Mundella, who, in 1860, at Sheffield, after a grievous series of strikes in the hosiery trade, succeeded in forming a conciliation and arbitration board. The movement, although regarded at first with extreme suspicion, turned out to be a marked success, and as nothing succeeds like success, the example gradually spread to the lace trade and to other trades. In 1869 it was adopted by the manufacturing iron trade at Darlington. The iron trade in South Staffordshire, in South Wales, and in Scotland, and the Cleveland ironstone mines, the Staffordshire potteries, the chemical trades of Northumberland and Durham, and various large collieries followed suit.

I will not attempt to describe in detail the very numerous trade conciliation boards which have been formed down to the present time upon a somewhat similar basis to that founded by Mr. Mundella. Their constitution is mainly that of a joint board or committee composed partly of employers and partly of employed, who meet together to settle rates and conditions of labor in connection with the particular trade in which they are jointly interested. Some of these boards assemble from time to time, as occasion may arise, others—as, for instance, in the case of the great colliery associations—adjust the rates of wages periodically, as we all know, by means of a sliding scale, fluctuating with the selling price of coal; many of them appoint an arbitrator or umpire in the event of the joint board being unable to come to an agreement. These boards have had an extremely useful career, and have done incalculable good in greatly diminishing the frequency of strikes and lockouts, although they have not, in some instances, succeeded in preventing them. This type of conciliation appears to be best adapted to large industries spreading over whole districts, where both the trade unions and the employers' associations are well organized, and are able to speak with authority on behalf of their respective constituents.

The great London dockers' strike in 1889, which affected the prosperity of the greatest commercial port in the world, led to the formation of the London Labor Conciliation and Arbitration Board, which was the work of the London Chamber of Commerce.

The board is composed of 12 members representing employers, who are annually elected by the council of the chamber, and of 12 representatives of labor annually elected by the delegates of the trade unions of London, every member having equal voting powers. In case of a labor dispute within the metropolitan area of London, the board offers its services to the disputants and invites them to a friendly conference. If the meeting takes place, neither side is committed nor compromised to any further course except with its own consent, but an effort is made to induce the disputants to arrive at an amicable agreement. In many if not in most cases, this procedure by conciliation has proved to be successful in arriving at a settlement. Where, however, conciliation by the above method has not succeeded, a recourse to arbitration under the auspices of the board is recommended. When requested, the board proceeds to appoint arbitrators, who, without delay, give a

full hearing to both parties in the presence of each other, and after due consideration the board makes its award. In appointing arbitrators, the board is not bound to confine nominations to members of its own body; but in this direction it has, after careful experiment, made a new departure which has proved eminently successful. It consists in naming a panel of arbitrators, either two or some other even number, one-half of whom are employers and the other half workmen, but none of whom is concerned in the dispute under adjudication. Thus constituted, the arbitrators are thoroughly impartial, and they are also practically acquainted from both sides of the question with the prevailing conditions of labor in the port of London. Mr. Boulton said:

When this idea was first mooted it was met in some quarters with something like derision. It was said that, as a matter of course, the workmen on the panel would all vote one way and the employers the other, and that a deadlock would thus at once ensue, and that in such a case the two orders, having an equality of votes, would never agree as to the choice of an umpire. It will surprise those who have not given much attention to the proceedings of the London Labor Conciliation and Arbitration Board, and it will gladden the hearts of all those who believe in a future of better relations between capital and labor, to be told that in every single instance when arbitrators have been appointed as above described the decision has been absolutely unanimous. I have taken part, as chairman, in almost all the arbitrations which have been conducted under the auspices of the board since its commencement. As an employer of labor in this and other countries, and as one who, during a long business career, has had some experience in arbitrations of various kinds, I can bear testimony to the spirit of thorough impartiality in which these mixed panels, the workmen equally with the masters, have approached and dealt with the questions submitted to their arbitration. And, as another matter for sincere congratulation, since the formation of the board there has never been an instance where the award arrived at under arbitration or the agreement entered into under the auspices of the board by its methods of conciliation has not been accepted and loyally carried out by both parties to the dispute. In almost all instances the board has been cordially thanked by both disputants; and it is of frequent occurrence that, after a first experience of its methods, both employers and employed in various industries continue from time to time to bring their difficulties before the board for adjustment. I can not but think that methods which have produced such results are worthy of more extensive application than has hitherto been accorded to them, and that voluntary conciliation boards, conducted upon principles which have thus far stood the test of experience, are perhaps the best methods of maintaining industrial peace.

To make this inquiry complete it was deemed advisable to obtain the views of a nonunion workingman of standing and character. Such a man was found whose character and efficiency as a workman was vouched for by his employer, one of the most prominent in London. This nonunion workman said he had no objection to giving his views

provided his name was not used, as he did not wish to become involved in difficulties with his associates. He said:

I have worked at my trade, man and boy, for more than forty years, and in all that time, except for a very brief period, I was never a member of a union. When I was quite young, immediately after I was out of my time, I was induced by the other men in the shop to become a member of a union and I remained a member for about three years, when I gave up my card, and I have never been connected with a union since. I don't believe in the union. I don't believe it has done much good for workingmen, and I feel quite sure that it has done them a great deal of harm. If there were no unions the best man among workmen, the man who can do the best work and who is willing to work the hardest, would get along the best and make the most money, just the same as he does in any other class; but the union won't let us do that. It insists that the man who wants to work shall do no more work than the lazy fellow, and the best workmen can earn no more than the worst. I do not believe in this talk about the union having done so much to improve the condition of the workingman. I think the workingman would have been just as well off if there had never been a union, and in some ways he would have been a great deal better off, because there would have been fewer strikes and not so many stoppages.

This man was asked whether the union had not enabled the workingman to save. His answer was:

I can't see it in that way. Come good, come bad times, I have always managed to put away a bit every week, and I can belong to a friendly society or a building society without having to be a member of a union. The unions take money from us to pay for strikes, and I want my money to be saved for the time when I can't work, or meet with an accident, or for the wife and children when I'm gone. Any man can save more outside of the union than he can in. I would belong to the union if I thought the union would do me or my mates any good, but I don't believe it does.

In 1896 Parliament passed an act—the conciliation act of 1896—which empowers the Board of Trade, where a difference exists or is apprehended between an employer and his workmen, to inquire into the cause and circumstances of the difference; to take such steps as to the board may seem expedient for the purpose of enabling the parties to meet together under the presidency of a chairman mutually agreed upon and nominated by the Board of Trade, with a view to amicably settling all the differences; on the application of employers and workmen to appoint a person to act as a conciliator or to appoint a board of conciliation; on the application of both parties to appoint an arbitrator. The Board of Trade is required to present to Parliament a report of the proceedings under this act, and the latest report, August 1, 1901, gives a history of proceedings under the terms of the act since it went into effect. “During the period covered by the present report the two most important points in connection with the administration of the conciliation act have been the relative increase in the number of joint applications to the Board of Trade for arbitration as compared with

ex parte applications for conciliation, and the growing tendency on the part of the volunteer boards of conciliation and arbitration to embody in their rules for an appeal to the Board of Trade to appoint umpires in case of a deadlock."

For the first ten months after the passage of the act 35 cases were acted upon by the board; during the next two years there were 32 cases, and during the last two years, ending July 1, 1901, there were 46. The total number of cases since the passage of the act is 113. During the last two years there were 3 cases of action by the board of trade without application from either side, 3 applications from employers only, 16 from workmen only, and 24 from both employers and workmen. The report says:

An interesting development in connection with the rules of voluntary conciliation boards and agreements between employers and work people providing for the establishment of such boards is the insertion in many cases of a clause providing that if the board fails to agree upon any question submitted to it the Board of Trade shall be asked to appoint an arbitrator or conciliator. No less than 35 boards are known to have adopted clauses of this character.

So far every application to the board for the appointment of an arbitrator or umpire, under the rules of the conciliation board, has been complied with. Provisions of this character provide a useful escape from the deadlock created when a conciliation board fails to agree, and, so far as possible, the board of trade has encouraged their adoption.

In the report on strikes and lockouts in the United Kingdom in 1901, issued by the Board of Trade, Mr. H. Llewellyn Smith, the head of the labor department, uses this language:

The settlement of strikes and lockouts forms but a very small proportion of the work of permanent conciliation and arbitration boards and joint committees. To appreciate these agencies at their true value account should also be taken of the numerous alterations effected in working conditions by them without any stoppage of work having taken place. Thus in the recent report on changes of wages and hours of labor in 1901 it is shown that 75 per cent of all the changes of the year, as measured by numbers of persons affected, were arranged by sliding scales, wages boards, or other methods of arbitration and conciliation, while only 2 per cent of the changes followed upon strikes or lockouts.

According to the eighth annual abstract of labor statistics of the United Kingdom for 1900-1901, issued by the Board of Trade, at the end of the year 1900 there were 1,272 trade unions, with a total membership of 1,905,116. A statistical abstract of the status of one hundred of the principal trade unions shows that these unions had a membership of 1,158,909 and an aggregate income of £1,974,611 (\$9,609,444), an average per member of £1 14s. 1d. (\$8.29). Their expenditures amounted to £1,490,582 (\$7,253,917), an average per member of £1 5s. 3d. (\$6.26). The total funds aggregated £3,766,625 (\$18,330,281),

which gave an average of £3 5s. (\$15.82) per member. These hundred unions expended for unemployed benefits during the year £265,328 (\$1,291,219), for dispute benefits £150,283 (\$731,352), for sick and accident benefits £323,231 (\$1,573,004), and for superannuation benefits £190,039 (\$924,825).

CONCLUSION.

Certain legitimate conclusions can be drawn from these opinions of men whose views are often antagonistic and antithetic—from the experience of men who always must look at the labor question from the opposite sides of the shield—who, no matter how sincere their purpose not to be governed by selfish motives or material consideration, are unconsciously influenced by personal interest. Whatever else may be subject of dispute, whatever else may continue to remain open to speculative inquiry and unsolvable because its solution rests on the personal answer which each man will supply according to his own personal convictions, it is evident that each side in some cases and both sides in others are convinced that trade unionism has produced certain exact results, so apparent, so firmly established, that they have ceased to be theories and have become facts. These are:

(1) The workingman who is a member of a union is firmly convinced that the union has been the means of materially improving his condition.

(2) The union workingman believes that the union and trade unionism in general has enabled him to obtain higher wages, shorter hours, and more humane treatment from his employer.

(3) But for the union, the cohesive force of organized labor, and the strength which comes from organization, the workingman believes that his wages would have been reduced, his workday lengthened, and legal and other social reforms would not have been made or their accomplishment would have been much slower.

(4) But for trade unionism collective bargaining would have been impossible, and the workingman believes that nothing has done more to improve his condition and bring about the general improvements which he credits to trade unionism than the substitution of collectivism for individualism in carrying on negotiations between employer and employer.

(5) A certain number of employers believe that trade unionism has been positively detrimental to the interests of the workman, as well as to the employer, and generally injurious to British industry and commerce.

(6) A certain number of employers, while not regarding the trade union in all its features for the best interests of capital and labor, still approve of it in principle, because by means of the trade union collectivism has been substituted for individualism, which is clearly for the benefit of both sides.

(7) Leaving aside the speculative inquiry whether boards of conciliation and arbitration would have come into existence if there had been no trade unions, those employers who believe in some method of averting or settling labor disputes by amicable adjustment rather than by force are convinced that the existence of the labor union has made it easier for the creation of such machinery and it has been of incalculable benefit to both sides.

(8) Employers who have instituted premium or bonus systems, or other methods by which superior and more economical work is compensated by a bonus over a standard wage, admit that these systems naturally flowed out of unionism, as the union has established a standard of wage and output which forms the basis of cost in the process of manufacture, the additional output above the minimum being regarded as an additional tax on the energy and skill of the worker, entitling him to extra remuneration. No employer pretends that in paying a bonus he is animated by philanthropic motives; he pays it because he believes it will pay him.

(9) Both employers and workmen are agreed as to the effect of unionism in restricting output, but they give it their own interpretation. Those employers who are convinced that unionism has restricted output look upon unionism as disastrous to industry. Those unionists who admit that it is necessary to fix a maximum, to protect the worker and prevent him from suffering from the cupidity or dishonesty of the employer, claim that the great body of workmen need to be protected against themselves, sometimes against their fellows, but more generally against their employers, and in adopting such measures of protection they are simply obeying the great rule of nature—that self-protection is paramount to every other consideration.

(10) Reluctant admission is made by unionists that in the past the attitude of the unions was antagonistic to the adoption of labor-saving and improved machinery. They claim that at the present time this antagonism is to be found only among those unions whose members, as a body, are low in the scale of intelligence, or occasionally among members of the highly skilled organizations who are ignorant of economic laws. The most intelligent labor leaders, however, assert their right to restrict the use of labor-saving and improved machinery when that use inures solely to the advantage of the employer and disastrously affects labor: when a machine, for instance, requiring only one or two men or boys to care for it, supplants the labor of perhaps six men. But, they assert, that if some of the profit accruing to the employer is shared by the employee in the form of increased wages or other amelioration of conditions of service, the workingman of intelligence does not oppose improvements in process of manufacture. The workingman believes it to be his duty to prevent himself from being "exploited" solely for the benefit of the employer; in other words, his manhood requires that

he shall resist by every means in his power having his face ground on the whetstone of capitalistic cupidity, which is the thing he fears most. Every improvement in the mechanical arts has led either to the displacement of a certain number of men or a rearrangement of manual labor. It is this constant flux, often resulting in severe distress until the displaced labor can be absorbed in other industries, that causes labor to regard with suspicion every mechanical improvement, and to make some of the least progressive men in their ranks look upon the machine as the means whereby they may be "exploited" by the employer, their pain being his profit.

Here one must proceed with more caution and a feeling of uncertainty. The investigator now sails a chartless sea, with no compass to point the direction to the safe haven, where the waters are unruffled by polemical waves. The assertion of the trade unionist that he is always willing to render "a fair day's work for a fair day's pay" is met by the rejoinder from the employer, "What is a fair day's work?" and the employer often contends that the position assumed by the unionist supports the allegation that the great aim of the union is to restrict or hamper the free exercise of the workman's powers, that the most baneful effect of trade unionism is to reduce all men to a dead level, and to set the amount of the day's work by the skill of the most inefficient rather than by the most efficient. A fair day's work for a fair day's pay is magnificent, but it is not business, some employers say. It sounds well rhetorically, but it means nothing practically. What constitutes a fair day's work for a fair day's pay? employers have repeatedly asked, only to be told that a fair day's work is the least that will satisfy the demands of the employer, but the fair day's pay is the utmost that can be obtained from the employer by the trade union.

One explanation given for the hold trade unionism has over its members in England is that the unions representing large and well-paid trades usually have well-filled treasuries and their members have contributed for so many years that they can not afford by any infringement of the rules or by noncompliance with the orders of the governing body to forfeit their share of the accumulated funds. "In a certain sense it would not be difficult to regard all the activities of trade unionism as forms of mutual insurance," is the expression used by Sidney and Beatrice Webb in "Industrial Democracy." The trade union not only provides a form of insurance, but many unions make provision for the time when their members, through advanced age or the loss of their physical powers, are no longer in receipt of full wages; and in case of a dispute with an employer, or when slack times cause a stoppage of factories and throw men out of work, it is to the union they look for support. A member may have joined his union before reaching his majority and may have met his payments and assessments

for a score of years, and yet at any moment he may be expelled or forfeit all claims against the society. Against his fellow-workers there is no appeal and no redress. Therefore, to enjoy the benefits which he has helped to create, a member of a trade union finds himself compelled to obey orders proceeding from the executive body, even if individually he regards those orders as foolish and unwarranted and distinctly detrimental to himself and his fellow-workers.

Many employers point to this as one of the evil influences of trade unionism. They say it has often happened that strikes have been ordered against the wish of the men, who were forced into leaving their work when a strike was declared because they could not afford to lose their savings, regarding temporary discomfort and the loss of their weekly wages as a smaller loss than the danger of expulsion from the union and the forfeiture of their accumulated savings.

The constitutions of most unions, however, throw many safeguards against hasty action by executive bodies and make it impossible for a strike to be declared unless it is agreed to by at least a majority of the members, and in many cases three-fourths of the membership must assent. The larger and better managed unions leave the matter of strikes to the branches, and while those subordinate branches have it in their power to prevent their members from working, provided always that this action has been indorsed by from a majority to three-fourths of the membership of that subordinate branch involved, the members can not look for financial support from the union as a whole unless the executive committee or other governing body has sanctioned this extreme method for obtaining redress for a real or imaginary wrong. The members of the executive committee are usually cautious and well-balanced men. They take a businesslike view of affairs. They are reluctant to spend the funds of the union, involving in some cases hundreds of thousands of dollars and the welfare of thousands of men, unless a vital principle is at stake or something may be gained worth fighting for. It is freely admitted that many strikes have been prevented because the members of the subordinate branches knew that they would not receive the financial support of the union and their local funds were not large enough to engage in a contest with any hope of victory.

The walking delegate and the business agent of the American union are practically unknown in England, and the tendency steadily increases to concentrate responsible power in the hands of a strong executive committee or other governing body. The executive officer is usually the secretary, an intelligent, capable, experienced man, who is subject to the control of this governing body and administers the affairs of his union within the narrow and rigid limits prescribed by constitution and rules. He possesses little, if any, discretionary power. The constitutions of the larger and better organized trade unions

clearly prove that the intent of the union is to retain the power of action producing serious consequences, or which may vitally affect the interests of the trade, in the hands of the managing body or council with the members the court of last resort. Thus it is impossible for any one man to order a strike or to cause a stoppage of work because in his personal opinion the men are not properly treated, or the rules and customs governing the trade are being violated, or to pay off an old score. It is true that the Taff Vale strike was brought about mainly through the action of one man—the organizing secretary—who after he had forced the strike was supported by his union, but the effect of the Taff Vale decision has been to make such a thing almost impossible in the future. It will more narrowly restrict the power of any one man and will make the action of the union the action of its responsible officers, who must assume the responsibility and suffer the penalties if the law has been violated.

Nor should the fact be overlooked—perhaps the most vital fact in modern trade unionism in England—that the constant effort of labor leaders is to substitute legal and peaceful methods for force, and to make the strike a thing to be availed of only when all other methods have been attempted and have failed. Almost every large union has either a conciliation board or some other machinery by which a disagreement or threatened dispute can be discussed without prejudice and without passion and means devised whereby an understanding can be reached without resorting to a suspension of operations. Without statute, without the intervention of the lawmaking power, a certain number, and by no means an inconsiderable number, of the workingmen of Great Britain have erected a code which has been accepted not only by themselves but by their employers, and which has proved an important auxiliary to the code created by Parliament. What may not inappropriately be called the judicature of labor—such agencies as the Durham miners' conciliation committee and other committees of the same character that have been mentioned in this report—is performing its functions exceedingly well and doing that which it is the end of all law to accomplish, the substitution of reason for folly, of an exact and orderly method of procedure for falsehood and violence. A result of this movement, of more importance perhaps than anything else, has been the enforcement of discipline and loyal acceptance of a verdict no matter how unpalatable, and the moral effect of this is simply incalculable. There is in Great Britain much room yet for improvement in the relations existing between capital and labor, but anyone who knows what has been done there to improve those relations must feel that in some things British labor sets an example to other countries which might well be followed, subject to the necessary modifications always required to engraft a foreign system on domestic institutions. The time and labor which this investiga-

tion involved will not have been wasted if the facts herewith presented help in even the smallest degree to promote more friendly relations between capital and labor, to diminish labor disputes, and to make strikes in the United States less frequent in the future than they have been in the past.

APPENDIX A.—THE TAFF VALE CASE.

The following is a brief history of a dispute which led to one of the most important judicial decisions affecting labor in England:

In June, 1900, discontent existed among the men employed on the Taff Vale Railway, a system formed by the amalgamation of four small lines in Wales, the general office being in Cardiff. On June 30, James Holmes, one of the organizing secretaries of the Amalgamated Society of Railway Servants, stationed in Cardiff, addressed a circular to the signalmen employed on the Taff Vale system, asking them if they were in favor of a movement to obtain an advance of wages, promotion by seniority, additional pay for Sunday duty, and a better arrangement of working hours. "A more favorable opportunity," Mr. Holmes wrote, "will never present itself, and if you are dissatisfied with the present conditions, sign this paper and return it to me."

This circular came to the notice of Mr. Richard Bell, the general secretary of the society, in London, and he wrote to Mr. Holmes, warning him that he was in danger of meeting with the disapproval of the executive committee, the administrative council of the society, for exceeding his functions.

In his report for July to the Railway Review, the official organ of the society and published by it, Mr. Holmes used the following language in referring to the Taff Vale Railway management. Mr. Bell, who, in addition to being the general secretary of the society, is also the editor of the Review, exercised his editorial prerogative to delete Mr. Holmes's report, but the suppressed portion was later published in a special report made by Mr. Bell:

I am also very much surprised if two of them, at least, will not soon have plenty to do at home—but we shall see, we shall see. There is nothing I would like better than to measure swords with this T. V. R. dictator, and who knows how soon the chance may come? I don't not only not fear him but court a try, and if the men will only prove men I shall have no fear of the results. There is a black mark to rub out and I swear I won't rest till it has been done. The whole of the men victimized by Mr. Hurman have now got good jobs, and the society money has made up the loss sustained, and it has done one thing more than that—it has shown them that this man is not everybody, and just given them a little more independence, Mr. Hurman, and by good nursing it will give an account of itself ere long. It is the fear of losing their jobs we have to kill, and that is being done the quicker the nearer the goal.

Meanwhile the feeling between the men and their employers had been growing more acute. The men had held meetings and had determined to strike, or, as the term goes in England, "hand in their notices" unless granted concessions, and Holmes had addressed meetings at which, to put it moderately, he used language the reverse of conciliatory. The company had increased the tension by taking action which was either a tactical blunder or else a deliberate adoption of methods to arouse feeling. Ewington, a signalman who had been for more than twenty years in the company's service, and who had taken a leading part in the agitation in favor of improved conditions, was ordered to be transferred to a remote part of the system. Rightly or wrongly, the men interpreted this order as an attempt to intimidate them and to make a victim of Ewington. The company asserted that, on the contrary, Ewington's transfer was in the nature of a promotion, as it carried with it an advance of two shillings (49 cents) a week. At the time Ewington received his notice of transfer he was confined to his bed with rheumatism and therefore was physically unable to comply with his instructions. He protested against being transferred, even at an increase of wages, as he was satisfied where he was; but, on recovery, finding that his protest was unheeded, offered to accept the new place, only to be told that inasmuch as he had refused the place the vacancy had been filled, and so also had been his old box or "cabin." The company then offered him a new cabin, but at three shillings (73 cents) a week less than he formerly received. This Ewington declined and demanded that he be restored to his former place. The company refused his demand.

Holmes wrote to Bell "that the treatment of Ewington is the worst case I have ever experienced;" and Bell replied to him, under date of July 31, 1900, "I have received full details from Mr. Ewington about his treatment by the company. I feel that the men have done right in protesting against such treatment, and I hope the effort they have made toward his reinstatement will have some effect upon the management."

After several meetings, the men, on August 6, sent in their notices to the company, and Holmes, in his report to Bell, said the matter was very serious, and "there is nothing for it but a strike unless Signalman Ewington is reinstated." Replying to Holmes the next day, Mr. Bell wrote:

After carefully considering the whole statement made in your letter and also in the newspaper report, I can not help but think that the men have been very impatient and very undecided as to their course of action, and I fear whether what they have done will be conducive to the best results. I see that 363 notices were handed in on August 6 on behalf of a portion of the signalmen, guards, and brakemen, that another portion will be handed in by the same classes of men on Monday next, and, judging by the report of the firemen's

meeting held last Sunday, the notices of the firemen will be handed in on the Monday following that. I can not for a moment understand why the men should be so undecided as to their course of action, at any rate with regard to the date for taking action. They all seem to have gone absolutely on their own responsibility, disregarding the society's rules, the E. C. [executive committee] decisions, and all reasonable advice.

Bell also added that "even had this movement received the sanction of the E. C. it is not being conducted in accordance with the rules." And again, a few days later, Bell once more called Holmes's attention to the fact that for the men to strike without the sanction of the executive committee was in violation of the rules. Holmes of course knew that he was proceeding unconstitutionally, but evidently relied on obtaining the support of the executive after the die had been cast. Interviewed by the South Wales News on August 14, he said he had no fear of the men not being supported by the executive. "But failing that," he added, "the committee are going to appeal to the 600 branches of our society and ask them to contribute out of the management fund, as they have full power to do, £1 (\$4.87) per 100 members."

Recognizing the seriousness of the situation and the dangers involved, the Right Hon. C. T. Ritchie, M. P., the president of the Board of Trade, and a member of the cabinet, invited Mr. Bell to an unofficial interview to discuss the dispute. As a result of that interview, after a conference between Mr. Ritchie and the chairman of the Taff Vale Railway Company, Mr. Ritchie informed Mr. Bell that the company will "provide Ewington with a situation at a signal box which would not entail upon him either traveling or removal from his present abode." Bell agreed to go to Cardiff to try to have Ewington accept the company's offer, but before leaving he received a letter from Holmes, who said:

I still hope we shall avoid a conflict, but I have now not much hope. Public sympathy is dead in our favor, and if it comes to a fight I have every confidence we can beat them and dictate our own terms in six days.

Bell went to Cardiff and there met Holmes, Ewington, and others. "About the first thing that took place," Bell says in his official report, "was that Mr. Holmes said he hoped I had not come down to interfere with them; that the movement had been carried on by the men themselves, and the negotiations made by him, and that it was quite independent of the society. He handed me a circular he had issued in proof of the statement that it was carried on apart from the society, and that he was assisting the men in his personal capacity."

This circular urged the men "to remember the hundred and one grievances under which you have suffered far too long," and exhorted the men to stand firm and "we can settle this dispute in our own way."

Bell took Ewington aside privately, told him what had happened

between Mr. Ritchie and himself, and asked him if he would accept the company's offer. To this Ewington answered that he was entirely in the hands of his fellow-workmen, and that he could not accept as they would think him a coward.

Mr. Ritchie was informed by telegraph of Ewington's refusal, and replied by wire that the chairman of the company had telegraphed him that unless the men withdrew their notices it would be necessary for the company to engage new men. Mr. Ritchie also wired that the men would put themselves in the wrong, and that the company had never been actuated by unfriendly feelings in their treatment of Ewington. Mr. Bell had wired Mr. Ritchie asking whether he would object to his seeing Mr. Vassall, the chairman of the company, and Mr. Ritchie at once replied: "Have wired Vassall it will be well for him to see you." Thereupon Mr. Bell wired Mr. Vassall asking for an interview and received this curt answer: "Regret can not meet you to discuss men's conditions of service." Mr. Ritchie made a final effort to prevent a strike by wiring to Mr. Bell, after that gentleman's return to London on August 18, that in his opinion a strike would be unwarrantable and would not be sustained by public opinion.

A special meeting of the executive committee had been called for August 19, and at this meeting a resolution was offered recognizing the justice of the men's claims for improved conditions of service, but refusing them financial support because the rules of the society had been violated. This resolution was defeated and an amendment, in the following language, adopted by 7 votes to 5:

That, after hearing the evidence of the deputation from the Taff Vale Railway and the correspondence relating to the dispute, we can not but conclude: First, That the move of the men by taking action prior to obtaining the consent of this committee [w]as most condemnatory; secondly, that by the removal of Signalmen Ewington the management of the company has acted most arbitrary, inciting the men to the present act; thirdly, having regard to both sides of the issue, we, as administrators of the society, decide that every effort be made by the general secretary and others we may appoint to bring the dispute to a speedy termination. We further, after careful consideration, hereby decide to support them financially.

Holmes was notified of the action of the executive committee, and a letter was sent by Mr. Bell to Mr. Ritchie, in which the following language was used:

From their report it appeared clear to my committee that a willful attempt had been made by Mr. Harland, superintendent of the line, to victimize Ewington. In support of this it is stated that Mr. Harland said he should inform Ewington that he had brought it all on himself, the company were determined to have a contented staff in their service, and they would be perfectly justified in discharging all those who took part in the recent agitation. I believe this can be proved, and that being the case, my committee were determined at all costs that such tyranny

should be put down. * * * I regret very much the strike taking place. I believe you are aware they are things I detest, and will do anything almost to avoid.

This is now beyond my control, and I have nothing to do but to lead the fight. However, I shall be quite ready at any moment to meet the management of the company to try to arrange terms. At this stage the settlement can be made only through me.

In obedience to the resolution adopted by the executive committee, Mr. Bell proceeded to Cardiff to take personal command of his forces. On arriving in Cardiff (August 20) he sent a communication to Mr. Beasley, the general manager of the Taff Vale Railway, making certain proposals for a settlement, but the effort was fruitless and the men went on strike. Mr. Ritchie made still another attempt to restore peace by notifying Mr. Bell by wire on August 23 that the company had decided to leave to him (Ritchie) the decision whether Ewington had been badly treated, provided the men would at once return to work, but to this the men would not consent, and on August 25 Mr. Hopwood, of the Board of Trade, was sent to Cardiff to take personal charge of the negotiations as Mr. Ritchie's representative.^(a) He had repeated conferences with Mr. Bell and the directors of the company, and on August 30 the men and the company accepted a compromise by which the company pledged itself to receive deputations from the men to discuss their grievances. Some of the men went back to work on September 1, and nearly all of the others were reinstated during the following week. Thus the strike, one of the shortest and one of the most important in the history of English labor, was brought to an end, but it proved to be one of the most costly, as the sequel will show. How far-reaching its effect and how deeply it may affect economic conditions, only the future can answer.

Immediately following the action of the men in leaving their employment, the Taff Vale Company obtained summonses against 208 men for breach of contract for having left the company's service without notice or with insufficient notice, and in the Cardiff police court 60 men

^(a) Mr. Hopwood in his report to the president of the Board of Trade said:

So far as I am personally concerned, and putting aside the Amalgamated Society of Railway Servants for the moment, this case has done enough to confirm me in my opinion that railway companies would lose nothing by deciding to receive in conference an agent of their servants, whoever he might be, as long as they were given reasonable evidence that such an agent really represented the majority of a class, and was prepared to take the responsibility of binding that class by his actions.

The decision of the executive was received with regret by Mr. Bell and the leaders who acted with him. Mr. Bell, as is usual in cases in which I have negotiated with him, played his difficult part with admirable fairness. He struggled hard to gain, and he did obtain through me, everything which he deemed would be essential to the best interests of the men, and I do not in the least blame him for being unable to induce the executive committee to accept terms which he knew to be fair and equitable under all the circumstances of the case. Mr. Bell, taking a wide and generous view of the pros and cons of the whole matter, grasped the fact that the terms would receive the approval of public sentiment. The executive committee, influenced by the strong feeling of their constituents, could merely deal with the subject from a narrower point of view.

were each fined £4 (\$19.47) and costs. The company next, August 23, applied for an injunction to restrain the Amalgamated Society of Railway Servants, Bell, Holmes, and the other officers and the members generally from doing certain acts alleged to be illegal, such as picketing, "besetting" the plaintiff's stations, intimidating and using violence toward the company's employees, and generally interfering with and obstructing the conduct of the company's business; also claiming damages in the sum of £24,626 (\$119,842) for the injury done to the plaintiffs by the loss of their business and the extra expense involved arising out of the unlawful and malicious conspiracy of the defendants. A temporary injunction and restraining order was issued against Bell, Holmes, et al., and the writ made returnable on August 30.

The case was heard in the high court of justice before Mr. Justice Farwell, who took under advisement the application against the society, but granted an interim injunction against Bell and Holmes to restrain them from watching and besetting the works of the plaintiffs or the places of residence of any workman employed by the plaintiffs, for the purpose of persuading or preventing any persons from working for the plaintiffs. On September 5 he made two orders, one refusing to strike the name of the society out of the action, and the other granting an interim injunction against the society, holding, contrary to the contention of the society, that it could be sued as a trade union. The defense set up by the society was that under the two acts of Parliament enacted for the creation of trade unions (34 and 35 Vic., c. 31, and 39 and 40 Vic., c. 22, more generally known as the trade unions acts of 1871 and 1876) a trade union was neither a corporation nor an individual nor a limited-liability company, and while the trustees of a union were empowered to bring or defend any action touching the property of the union, and in all cases concerning the real or personal property of the union might sue or be sued, the union, as a union, was not collectively liable for the acts of its members or responsible for those acts either civilly or criminally. The importance of a judicial interpretation of this section of the act was of the utmost consequence to the trade unions no less than to the general public.

Justice Farwell gave a new status to the trade unions by deciding that the union, as a union, was an entity to be reached by the process of the court, arriving at his conclusion in these words:

Although a corporation and an individual, or individuals, may be the only entities known to the common law who can sue or be sued, it is competent to the legislature to give to an association of individuals, which is neither a corporation nor a partnership nor an individual, a capacity for owning property and acting by agents; and such capacity, in the absence of express enactment to the contrary, involves the necessary correlative of liability, to the extent of such property, for the acts and defaults of such agents—in other words, the liability of being sued in its registered name.

As to the competency of the action against Bell and Holmes, as individuals, no question was raised, but from the decision granting the interlocutory injunction against the society an appeal was taken.

The strike terminated long before the appeal could be heard, and therefore, so far as the injunction affected the freedom of action of the parties involved, it was a dead letter, but both sides saw at once that a vital question was at issue. The Taff Vale Company knew that an action for damages against individual members, in the event of that action being successful, would in all probability be a barren victory, as on other occasions employers had obtained verdicts and damages against their employees which could not be satisfied because the employees, not being men of substance, had no property that could be attached. But here was an entirely different case. Here was a society with \$1,500,000 in its treasury, and if the decision went against the society it could not escape its responsibility. Naturally, both sides were determined to defend what each considered to be its rights.

The appeal came on for hearing in the court of appeals before the master of the rolls, Lord Justice Collins and Lord Justice Sterling on November 12, 1900. The only question at issue was whether Mr. Justice Farwell had erred in deciding that the society could be sued. Mr. Haldane, Q. C., M. P., for the appellants, maintained that, following the strict letter of the acts of 1871 and 1876, a trade union could not be sued. Sir E. Clarke, Q. C., for the respondents, contended that if this argument was sound the act of 1871 had created "a society that would bear the character of a chartered libertine. I maintain," he said, "that the legislature intended to create an entity."

Judgment was given on November 21, the master of the rolls reading the unanimous opinion of the court. In his opinion the master of the rolls said:

If a trade union can be sued in the manner proposed in this case, the funds of the union will be liable to be taken in execution under a judgment obtained against the union in the society's name. Whether this ought to be so or not is one thing which I have not to inquire into. Whether it is so, that is, whether the union can be sued in this manner proposed, is another matter, and this I have to decide. Mr. Justice Farwell has held that this action is maintainable against the union in the society's name, and against this judgment it is that the members of the trade union appeal. The learned judge in the early part of his judgment says what is undoubtedly the truth when he said that a "trade union is neither a corporation nor an individual, nor a partnership between a number of individuals," and in this I entirely agree. There can, in my judgment, be no doubt that at common law the defendants could not be sued in the name in which they are sued in this action, any more than a tradesman could sue a defendant in the name of a West End club for goods supplied by him to that club, for the simple reason that the name of a club is not the name of a corporation nor an individual member of a partnership, which, apart from statute, are the only entities known to the law as being capable of being sued. In order,

therefore, that the action can be maintained against the defendants in the name of "Amalgamated Society of Railway Servants," there must be some statute enabling this to be done, either by creating the society a corporation or enacting that it may be sued in its registered name, and this, as the learned judge states—and in this I also agree—depends upon the true construction of the trades-union acts.

The court held that there was no section in the acts empowering a trades union to sue or be sued, and that if the legislature had intended to make that possible "the legislature well knew how, in plain terms, to bring about such a result." In conclusion, the master of the rolls said:

As there is no statute empowering this action to be brought against the union in its registered name, it is not maintainable against the Amalgamated Society of Railway Servants, *en nomine*, and these defendants must therefore be struck out, the injunction against them must be dissolved, and the appeal as regards these defendants must be allowed with costs here and below.

From the judgment the company asked leave to appeal, and served notice on the society that it had lodged an appeal in the House of Lords, the court of last resort in England.

The appeal was heard before the Lord Chancellor and Lords Macnaghten, Shand, Brampton, and Lindley, the court, by a unanimous bench, overruling the court of appeal and sustaining the judgment of Mr. Justice Farwell. In pronouncing the opinion of the court the Lord Chancellor said:

In this case I am content to adopt the judgment of Farwell, J., with which I entirely concur; and I can not find any satisfactory answer to that judgment in the judgment of the court of appeal which overruled it. If the legislature has created a thing which can own property, which can employ servants, which can inflict injury, it must be taken, I think, to have impliedly given the power to make it suable in a court of law for injuries purposely done by its authority and procurement. I move your lordships that the judgment of the court of appeal be reversed, and that of Farwell, J., restored.

Lord Macnaghten in concurring said:

May a registered trade union be sued in and by its registered name? For my part I can not see any difficulty in the way of such a suit. It is quite true that a registered trade union is not a corporation, but it has a registered name and a registered office. The registered name is nothing more than a collective name for all the members. The registered office is the place where it carries on its business. A partnership firm which is not a corporation, nor, I suppose, a legal entity, may now be sued in the firm's name; and so, when I find that the act of Parliament actually provides for a registered trade union being sued in certain cases by its registered name as a trade union, and does not say that the cases specified are the only cases in which it may be so sued, I can see nothing contrary to principle or contrary to the provisions of the trade-union acts in holding that a trade union may be sued by its registered name.

Lords Shand and Brampton, in short opinions, agreed with Lord Macnaghten, using substantially the same language. Lord Lindley said:

I entirely repudiate the notion that the effect of the trade-union act of 1871 is to legalize trade unions and confer on them rights to acquire and hold property, and at the same time to protect the union from legal proceedings if their managers or agents acting for the whole body violate the rights of other people. For such violation the property of a trade union can unquestionably, in my opinion, be reached by legal proceedings properly framed. The court of appeal has not denied this, but it has held that the trade union can not be sued in its registered name; and in strictness the only question for determination by your lordships now is whether the court of appeal was right in holding that the name of the trade union ought to be struck out or the writ and the injunction granted against the trade union in that name ought to be discharged.

A careful study of the act leads me to the conclusion that the court of appeal held, and rightly held, that trade unions are not corporations; but the court held, further, that, not being corporations, power to sue and be sued in their registered name must be conferred upon them, and that the language of the statutes was not sufficient for the purpose. Upon this last point I differ from them. The act appears to me to indicate with sufficient clearness that the registered name is one which may be used to denote the union as an incorporated society in legal proceedings, as well as for business and other purposes. The use of the name in legal proceedings imposes no duties and alters no rights; it is only a more convenient mode of proceeding than that which would have to be adopted if the name could not be used. I do not say that the use of the name is compulsory, but it is, at least, permissive.

Immediately after the decision in the House of Lords, the company began an action for damages to recover the sum of £24,626 (\$119,842), the bill of complaint of plaintiffs setting forth:

The plaintiffs have suffered damage by reason of the defendants, other than the trustees, unlawfully and maliciously conspiring together to molest and injure the plaintiffs in their business, or alternately by reason of an unlawful combination on the part of the said defendants to carry on a strike of the plaintiffs' servants by unlawful means, or in the further alternative by reason of the said defendants individually having knowingly committed violations of the legal rights of the plaintiffs.

The company secured a verdict for the full amount claimed in its bill of complaint, and seeing the futility of further continuing the fight, the society reached a settlement with the company and paid the sum of £23,000 (\$111,930) to compromise the suit and in payment in full of all damages against the society or any of its officers or members. The case from first to last cost the society in round figures, £50,000 (\$243,325), as in addition to the £23,000 (\$111,930) paid as damages, the society paid the company's taxed costs, amounting to £13,000 (\$63,265), and the society's costs and other legal expenses reached an

amount not much less. But it is interesting to note as showing the financial strength of the society that after the payment of these heavy sums, and without having to levy any increased or extra assessment to meet them, there still remained in the treasury £274,000 (\$1,333,421).

Pending the trial of the action a serious division was caused in the ranks of the society because the suggestion was made that the society should disavow Holmes and his actions, and allow him to defend himself without the financial support of the society. The solicitors engaged by the society suggested that it might be wise for Holmes to be represented by separate counsel at the trial of the action, so that the union would be in a position to claim that the actions of Holmes were unauthorized. To this suggestion Mr. Bell replied that it was impossible for the society or himself to associate themselves with Mr. Holmes in his defense, as his actions up to the 20th of August were entirely upon his own responsibility and contrary to the rules and regulations of the society. Holmes appealed to the executive committee not to separate his defense from that of the society, and warned the committee that if this plan was followed he would be a hostile witness against the society, which would be the means of costing it thousands of pounds.

After prolonged debate the executive committee decided that Holmes should receive full legal protection at the trial and the funds of the society should be used in his defense. When the result of the committee's action was known the Liverpool branch served notice on the executive committee that in case society funds were used in payment of Holmes's defense, members of the committee and the trustees would be held personally and pecuniarily responsible, and steps would be taken to secure a refund, and a few days later action was begun by the Liverpool branch for an injunction to restrain the society from using the funds. The motion coming on for hearing before Mr. Justice Joyce in the court of chancery, the injunction prayed for was granted on the ground that the use of the society's funds for the purpose proposed was contrary to the rules and constitution of the society. The question of an appeal from the decision of Justice Joyce was seriously considered, but further proceedings were rendered unnecessary by the settlement of the main action.

This celebrated case gave rise to a long debate in the House of Commons on the 14th of May, 1902. A resolution was introduced declaring that "legislation was necessary to prevent workmen being placed by judge-made law in a position inferior to that intended by Parliament in 1875," and the supporters of the resolution demanded that the Government appoint a committee to investigate the subject and ascertain if the law needed amendment.

Mr. Bell, in the course of his speech, said:

The promoters of the act had not the least notion of making unions legal and suable entities. Therefore, from 1871 to 1901, thirty years,

during which period not less than 25,000 strikes and lockouts must have occurred, lords, commons, judges, lawyers, employers, and workmen, all had believed that trade unions were not suable for wrongs committed by officers and members. * * *

To expose the large amalgamated societies of the country with their accumulated funds, sometimes reaching a quarter of a million sterling, to be sued for damages by any employer in any part of the country, or by any discontented member, or nonunionist, for the action of some branch secretary or delegate, would be a great injustice. If every trade union were liable to be perpetually harassed by actions at law on account of the doings of individual members; if trade unions funds were to be depleted by lawyers' fees and costs, if not even by damages and fines, it would go far to make trade unionism impossible for any but the most prosperous and experienced artisans.

Mr. Bell contended that while it was declared illegal for trade unions to strike in order to compel men to join unions, the employers were at liberty to discharge men simply because they were members of trade unions. "What we complain of," he said, "is that the new interpretation put on the law by the judge is all in favor of the employer."

The Attorney-General, Sir Robert Finlay, replying, said:

What the House of Lords decided was that the ordinary law of the land applied to trade unions as to everybody else. They did not introduce any exceptional law for the case of trade unions; they decided that where those who constitute trade unions employ officials, for the acts of those officials within the scope of their authority, within the scope of their duty, they are liable, just as any other employer is liable for the acts of his servants. That is the whole decision in the Taff Vale case. * * *

It would be a marvelous thing if an association of individuals were to be at liberty to employ servants and officials for the purpose of doing a certain class of acts relating to trade disputes, and yet not be liable in the case of injury being done by those acts.

The debate was further participated in by Mr. Keir Hardie, Mr. Asquith, Mr. Haldane, and other prominent lawyers, who pointed out that too much uncertainty existed regarding the legal status of trade unions, and that the trade-union acts needed amendment.

The resolution, however, was defeated, but some months later, owing to continued agitation on the subject, the Government admitted that a useful purpose might be served by an inquiry and appointed a royal commission on trade disputes. The commission consists of the Rt. Hon. A. Graham Murray, K. C., M. P., Lord Advocate for Scotland, chairman; Sir William Lewis, Bart., a leading colliery owner of South Wales; Sir Godfrey Lushington, G. C. M. G., K. C. B., formerly under secretary to the home office, Arthur Cohen, K. C., a leading member of the bar, and Mr. Sidney Webb, L. C. C., the well-known sociologist. The trade unions, however, have resolved to ignore the commission on the ground that a fair inquiry is impossible, unless organized labor is represented on the commission by a member; and that the commission as it is now composed is virtually

packed against labor. Labor men call attention to the fact that Mr. Murray, both in 1902 and in 1903, voted against the trade-unionists, that Sir William Lewis, as an employer, has always been an active opponent of trade unionism, and that both Sir Godfrey Lushington and Mr. Sidney Webb have written articles upholding the Taff Vale decision.

At a joint meeting of the management committee of the General Federation of Trade Unions, the parliamentary committee of the trade-union congress, and the labor representation committee, which was held after the appointment of the commission was announced, a resolution was adopted protesting against the appointment of the commission as "being calculated to hinder the early settlement of the point at issue, and in addition to this fundamental objection, we protest against the composition of the committee, which includes a majority of members already committed to a course of action in relation to the subject they have to examine and report upon, and, in addition, certain representatives of the organized employers but no representative of the organized workman, and is therefore neither impartial nor judicial." It was also agreed that no evidence or assistance was to be given to the commission by workingmen, and since the commission has been organized, although numerous invitations have been extended to the representatives of organized labor to appear before the commission, they have resolutely declined to do so.

Because of the leading part taken by Mr. Richard Bell, the general secretary of the Amalgamated Society of Railway Servants, his views on this momentous decision are of more interest than those of any other man connected with labor. Its effect, he says, can not yet be determined, because sufficient time has not elapsed. One thing, however, has clearly demonstrated itself, and that is, it will have an enormous political effect—a greater political effect than anything that has ever before happened in Great Britain. The decision will be felt by all workers, members of unions and those who are outside the unions, and will inevitably lead to political action. Mr. Bell said:

For thirty years past the unions believed that under the law which gave them a legal existence their funds could not be attached, and suddenly, without warning, this blow was struck at them—a blow which entirely upset all their previous calculations and forced them to take an entirely different view of their position in the eyes of the law. I am not discussing now the justice or injustice of this decision, but I am merely voicing what every unionist believes, and that is that his funds were safe from attack; that they were immune from assault, which possibly may have led to a certain looseness in union management, which was only natural, which perhaps resulted in a certain laxity in the framing of our rules, which, considering the practice that has prevailed for more than a quarter of a century, is not to be wondered at.

Where we feel that this society has been hit very hard is that here

was a decision, casting us in enormous damages, which came upon us without notice, without the least opportunity for us to put our house in order. Had we been given any admonition, and had we then contumaciously disregarded it, that would have been another matter, but we were given no opportunity to keep ourselves within our legal rights.

Let me make it quite clear to you why we consider a great injustice has been done us. Prior to the time of the rendering of this decision we were led to believe that we enjoyed certain privileges not possessed by the employer, in that a trade union could not be sued except by its members, or could not sue except in protection of its own rights and property. Now we find ourselves not on the same legal level as employers, but reduced below them, because they are permitted legally to do certain things which would be illegal for us to do.

For instance, an employer may refuse to employ or may discharge a man because he is a member of a union, and he incurs no legal liability for that action, whereas for a union man to refuse to work because he objects to the employment of a nonunion man subjects the unionist to the pains and penalties of conspiracy. Let me illustrate. Suppose a shop employing 100 men, 95 of whom are members of the union and 5 nonunionists. If the 95 men say to the employer he must discharge the other 5 or they will strike, and the employer refuses to discharge the 5 obnoxious men and the 95, after having given proper legal notice, without threat, violence, or intimidation of any sort, leave their employment, they may be held guilty of having conspired together and be punished accordingly. And if, on the other hand, the employer should say that he can not afford to have a strike, and therefore it is cheaper for him to discharge the 5 nonunionists, and accordingly does discharge them, the 5 men so discharged are within their legal rights when they bring an action for conspiracy against the 95 for having conspired together to prevent them from earning their livelihood and enjoying the right to work. Mind you, the action is not against the employer, but against the men. You see, therefore, that the employer incurs no liability or responsibility whatever. He has all the rights, and we, the union workmen, must suffer all the consequences. This we hold to be most decidedly unjust and inequitable, and as giving to the employer privileges superior to those which we possess. That, of course, is wrong.

• We do not ask that the trade unions or trade-unionists as a class should be relieved of any responsibility that properly belongs to them, but we do ask that no greater or heavier responsibility should be imposed on trade-unionists than on employers as a class. All we ask is that a union should not be made responsible for the acts of individual members or the unauthorized action of subordinate officials, but should only be held to strict accountability for whatever follows as the result of the action of those officials who by the constitution and by-laws of the society are vested with its management. That is the crux of the Taff Vale decision. What was done in the case was done, as a history of the case will show, not by the action of the executive committee of our society, but in violation of its rules and owing to the advice given by a minor official. The danger is that unscrupulous employers—mind you, I do not mean to say all employers, or even a majority of them, but certain employers who are not mindful of their obligations—might goad their men into taking such action as would, under this latest judicial decision, subject the men to the charge of having entered into a

conspiracy, and thereby make the union responsible and liable in money damages.

The effect of this decision, in my opinion, will be twofold. It will undoubtedly have considerable political effect and make the great body of workmen trust less to others and more to their own class and for that reason try to secure a larger labor representation in Parliament. This feeling may result perhaps in the wisest men not being selected at first, but ultimately the right men will come to the top and the most level headed will be those who will lead the labor party.

The other effect of the decision, which has already been seen, is undoubtedly to make unionism more cautious, and it has steadied the firebrands. Before proceeding to take extreme action men will want to feel quite certain that they are acting strictly within their legal rights, because no one will want to run the risk of committing an illegal act which may be attended with such disastrous results. In our case it has led to certain amendments of our rules in accordance with the terms of the decision.

Mr. Isaac Mitchell, the secretary of the General Federation of Trade Unions, believes that the effect of the decision will be to make the unions develop more and more into political organizations and force them to exert their strength to elect their own members to Parliament. At the time when this investigation was being carried on England was much interested in an election for Parliament which had just taken place to fill a vacancy in the Castle Barnard division of York caused by the death of its former representative. The election resulted in the choice of Mr. Arthur Henderson, the labor candidate, who was opposed by both a Conservative and a Liberal, and it was admitted by politicians of all shades of opinion that it was distinctly a labor victory. Mr. Henderson is a member of the Iron Founders' Union. Members of Parliament, unlike members of Congress, are not paid, and therefore it is practically impossible for a man without means to sit in Parliament. To overcome this difficulty, the Iron Founders' Union pays Mr. Henderson from its funds the sum of £300 (\$1,460) a year.

Mr. Maddison, the treasurer of the General Federation of Trade Unions, is a member of the Iron Founders' Union, one of the oldest, if not the oldest, union in the country. Not until about a year ago, said Mr. Maddison, did his union pay any attention whatever to political questions; but now, as shown by the support given to the election of Mr. Henderson, it had become political, and this was due entirely, he asserted without hesitation, to the Taff Vale decision. Practically every union in the country had decided to do the same thing, and will try to elect as many members of Parliament as possible at the next general election, so as to form in Parliament an independent labor party, that party to be neither Conservative nor Liberal, but to vote with Conservatives or Liberals as it might be for the best interests of labor for the time being.

Mr. Mitchell also believes that the Taff Vale decision will result in a modification of the existing rules of many of the unions, and it will possibly compel them to proceed more cautiously, and even make them to err on the safe side, until they more clearly understand what their exact powers and privileges are. The decision will not intimidate the men or frighten them out of the union. On the contrary, it will help unionism by making it a political power and increase its membership, because men who before took no interest in the union and saw no occasion for joining it will now see that it is for their personal interest to strengthen organized labor and act with it as a political factor. Summed up, the opinion of Mr. Mitchell is that while the decision is unjust it is one of the best things that could have happened for unionism.

Mr. Gibb, the general manager of the North Eastern Railway Company, believes that the ruling of the House of Lords will make the unions more cautious and increase the power of the leaders to control their more hot-headed members. The unions, or some of them at least, Mr. Gibb thinks, have shown a tendency to revert to the militant type, due in some measure to the lack of tact of employers. The Taff Vale decision will not make the unions lose their power, but it will make them exercise greater care when a strike takes place and less inclined to do anything which may bring them within the prohibition of the law.

The labor unions object to Mr. Sidney Webb as a member of the royal commission to investigate trade disputes because they claim he has written in defense of the Taff Vale decision. The sum of his offending is found in the preface to the 1902 edition of "Industrial Democracy," where he uses this language:

At first sight there would seem little or nothing to complain about. The judgment professes to make no change in the lawfulness of trade unionism. No act is ostensibly made wrongful which was not wrongful before. And if a trade union, directly or by its agents, causes injury or damage to other persons by acts not warranted in law, it seems not inequitable that the trade union itself should be made liable for what it has done. The real grievance of the trade unions, and the serious danger to their continued usefulness and improvement, lies in the uncertainty of the English law and its liability to be used as a means of oppression. This danger is increased and the grievance aggravated by the dislike of trade unionism and strikes which nearly all judges and juries share with the rest of the upper and middle classes.

The public opinion of the propertied and professional classes is, in fact, even more hostile to trade unionism and strikes than it was a generation ago. In 1867-1875, when trade unionism was struggling for legal recognition, it seemed to many people only fair that, as the employers were left free to use their superiority in economic strength, the workmen should be put in a position to make a good fight of it against the employers. Accordingly, combinations and strikes were legalized, and some sort of peaceful picketing was expressly authorized

by statute. So long as no physical violence was used or openly threatened, the mild tumult and disorder of a strike, a certain amount of harmless obstruction of the thoroughfares, and the animated persuasion of blacklegs by the pickets were usually tolerated by the police and not seriously resented by the employers. It all belonged to the conception of a labor dispute as a stand-up fight between the parties, in which the State could do no more than keep the ring. Gradually this conception has given way in favor of the view that, quite apart from the merits of the case, the stoppage of work by an industrial dispute is a public nuisance, an injury to the commonweal, which ought to be prevented by the Government. Moreover, the conditions of the wage contract are no longer regarded only as a matter of private concern. The gradual extension of legislative regulation to all industries, and its successive application to different classes of workers and conditions of employment, decisively negatives the old assumption of the employer that he is entitled to hire his labor on such terms as he thinks fit. On the other hand, public opinion has become uneasy about the capacity of English manufacturers to hold their own against foreign competition, and therefore resents as a crime against the community any attempt to restrict output or obstruct machinery of which the trade unions may be accused. And thus we have a growing public opinion in favor of some authoritative tribunal of conciliation or arbitration, and an intense dislike of any organized interruption of industry by a lockout or strike, especially when this is promoted by a trade union which is believed—often on the strength of the wildest accusations in the newspapers—to be unfriendly to the utmost possible improvement of processes in its trade.

APPENDIX B.—MR. RICHARD BELL'S BILL TO LEGALIZE THE CONDUCT OF TRADE DISPUTES, INTRODUCED IN THE HOUSE OF COMMONS, MARCH 25, 1902.

[2 EDW. 7.] **TRADE DISPUTES.**—A BILL to legalize the peaceful conduct of trade disputes.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by authority of the same, as follows:

1. Where an act is done in contemplation or furtherance of a trade dispute, the person doing the act shall not be liable to an action on the ground that by that act he interfered, or intended to interfere, either with the exercise by another person of his right to carry on his business, or with the establishment of contractual relations between other persons: *Provided*, That nothing in this section shall exempt such persons from liability on any other ground.

2. An agreement or combination by two or more persons to do or procure to be done any act in contemplation or furtherance of a trade dispute shall not be ground for an action, if such act when done by one person is not a ground for an action.

3. An action shall not be brought against a trade union, or against any person or persons representing the members of a trade union in his or their respective capacity, for any act done in contemplation or furtherance of a trade dispute.

4. Attending at or near the house or place where a person resides, or works, or carries on business, or happens to be, or the approach to such a house or place, in order merely to persuade such person peaceably to do or abstain from doing that which he has a legal right to do or abstain from doing, shall not be deemed a watching or besetting within the meaning of section 7 of the conspiracy and protection of property act, 1875.

5. This act may be cited as the Trade Dispute Act, 1902.

APPENDIX C.—THE TRADE UNIONS ACTS OF 1871 AND 1876.

AN ACT to amend the law relating to trades unions [29th June, 1871].

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

PRELIMINARY. .

1. This act may be cited as "The Trade Union Act, 1871."

CRIMINAL PROVISIONS.

2. The purposes of any trade union shall not, by reason merely that they are in restraint of trade, be deemed to be unlawful, so as to render any member of such trade union liable to criminal prosecution for conspiracy or otherwise.

3. The purposes of any trade union shall not, by reason merely that they are in restraint of trade, be unlawful so as to render void or voidable any agreement or trust.

4. Nothing in this act shall enable any court to entertain any legal proceeding instituted with the object of directly enforcing or recovering damages for the breach of any of the following agreements, namely:

(1) Any agreement between members of a trade union as such concerning the conditions on which any members for the time being of such trade union shall or shall not sell their goods, transact business, employ, or be employed.

(2) Any agreement for the payment by any person of any subscription or penalty to a trade union.

(3) Any agreement for the application of the funds of a trade union (a) to provide benefits to members; or (b) to furnish contributions to any employer or workman not a member of such trade union, in consideration of such employer or workman acting in conformity with the rules or resolutions of such trade union; or (c) to discharge any fine imposed upon any person by sentence of a court of justice; or,

(4) Any agreement made between one trade union and another; or,

(5) Any bond to secure the performance of any of the above-mentioned agreements.

But nothing in this section shall be deemed to constitute any of the above-mentioned agreements unlawful.

5. The following acts, that is to say, (1) the friendly societies acts, 1855 and 1858, and the acts amending the same; (2) the industrial and provident societies act, 1867, and any act amending the same; and

(3) the companies acts, 1862 and 1867, shall not apply to any trade union, and the registration of any trade union under any of the said acts shall be void, and the deposit of the rules of any trade union made under the friendly societies acts, 1855 and 1858, and the acts amending the same, before the passing of this act, shall cease to be of any effect.

REGISTERED TRADE UNIONS.

6. Any seven or more members of a trade union may, by subscribing their names to the rules of the union and otherwise complying with the provisions of this act with respect to registry, register such trade union under this act, provided that if any one of the purposes of such trade union be unlawful such registration shall be void.

7. It shall be lawful for any trade union registered under this act to purchase or take upon lease in the names of the trustees for the time being of such union any land not exceeding one acre, and to sell, exchange, mortgage, or let the same, and no purchaser, assignee, mortgagee, or tenant shall be bound to inquire whether the trustees have authority for any sale, exchange, mortgage, or letting, and the receipt of the trustees shall be a discharge for the money arising therefrom; and for the purpose of this section every branch of a trade union shall be considered a distinct union.

8. All real and personal estate whatsoever belonging to any trade union registered under this act shall be vested in the trustees for the time being of a trade union appointed as provided by this act for the use and benefit of such trade union and the members thereof, and the real or personal estate of any branch of a trade union shall be vested in the trustees of such branch, and be under the control of such trustees, their respective executors or administrators, according to their respective claims and interests, and upon the death or removal of any such trustees the same shall vest in the succeeding trustees for the same estate and interest as the former trustees had therein, and subject to the same trusts, without any conveyance or assignment whatsoever, save and except in the case of stocks and securities in the public funds of Great Britain and Ireland, which shall be transferred into the names of such new trustees; and in all actions, or suits, or indictments, or summary proceedings before any court of summary jurisdiction, touching or concerning any such property, the same shall be stated to be the property of the person or persons for the time being holding the said office of trustee, in their proper names, as trustees of such trade union, without any further description.

9. The trustees of any trade union registered under this act, or any other officer of such trade union who may be authorized so to do by the rules thereof, are hereby empowered to bring or defend, or cause to be brought or defended, any action, suit, prosecution, or complaint in any court of law or equity touching or concerning the property, right, or claim to property of the trade union; and shall and may, in all cases concerning the real or personal property of such trade union, sue and be sued, plead and be impleaded, in any court of law or equity, in their proper names, without other description than the title of their office; and no such action, suit, prosecution, or complaint shall be discontinued or shall abate by the death or removal from office of such persons, or any of them, but the same shall and may be proceeded in by their successor or successors as if such death, resignation, or

removal had not taken place; and such successors shall pay or receive the like costs as if the action, suit, prosecution, or complaint had been commenced in their names for the benefit of or to be reimbursed from the funds of such trade union, and the summons to be issued to such trustee or other officer may be served by leaving the same at the registered office of the trade union.

10. A trustee of any trade union registered under this act shall not be liable to make good any deficiency which may arise or happen in the funds of such trade union, but shall be liable only for the moneys which shall be actually received by him on account of such trade union.

11. Every treasurer or other officer of a trade union registered under this act, at such times as by the rules of such trade union he should render such account as hereinafter mentioned, or upon being required so to do, shall render to the trustees of the trade union, or to the members of such trade union, at a meeting of the trade union, a just and true account of all moneys received and paid by him since he last rendered the like account, and of the balance then remaining in his hands, and of all bonds or securities of such trade union, which account the said trustees shall cause to be audited by some fit and proper person or persons by them to be appointed; and such treasurer, if thereunto required, upon the said account being audited, shall forthwith hand over to the said trustees the balance which on such audit appears to be due from him, and shall also, if required, hand over to such trustees all securities and effects, books, papers, and property of the said trade union in his hands or custody: and if he fail to do so the trustees of the said trade union may sue such treasurer in any competent court for the balance appearing to have been due from him upon the account last rendered by him, and for all the moneys since received by him on account of the said trade union, and for the securities and effects, books, papers, and property in his hands or custody, leaving him to set off in such action the sums, if any, which he may have since paid on account of the said trade union; and in such action the said trustees shall be entitled to recover their full costs of suit, to be taxed as between attorney and client.

12. If any officer, member, or other person being or representing himself to be a member of a trade union registered under this act, or the nominee, executor, administrator, or assignee of a member thereof, or any person whatsoever, by false representation or imposition obtain possession of any moneys, securities, books, papers, or other effects of such trade union, or, having the same in his possession, willfully withhold or fraudulently misapply the same, or willfully apply any part of the same to purposes other than those expressed or directed in the rules of such trade union, or any part thereof, the court of summary jurisdiction for the place in which the registered office of the trade union is situate upon a complaint made by any person on behalf of such trade union, or by the registrar, or in Scotland at the instance of the procurator fiscal of the court to which such complaint is competently made, or of the trade union, with his concurrence, may, by summary order, order such officer, member, or other person to deliver up all such moneys, securities, books, papers, or other effects to the trade union, or to repay the amount of money applied improperly, and to pay, if the court think fit, a further sum of money not exceeding twenty pounds [\$97.33], together with costs not exceeding twenty shil-

lings [84.87]; and in default of such delivery of effects, or repayment of such amount of money, or payment of such penalty and costs aforesaid, the said court may order the said person so convicted to be imprisoned, with or without hard labor, for any time not exceeding three months: *Provided*, That nothing herein contained shall prevent the said trade union, or in Scotland Her Majesty's advocate, from proceeding by indictment against the said party; *Provided, also*, That no person shall be proceeded against by indictment if a conviction shall have been previously obtained for the same offense under the provisions of this act.

REGISTRY OF TRADE UNION.

13. With respect to the registry under this act of a trade union and of the rules thereof, the following provisions shall have effect:

(1) An application to register the trade union and printed copies of the rules, together with a list of the titles and names of the officers, shall be sent to the registrar under this act.

(2) The registrar, upon being satisfied that the trade union has complied with the regulations respecting registry in force under this act, shall register such trade union and such rules.

(3) No trade union shall be registered under a name identical with that by which any other existing trade union has been registered, or so nearly resembling such name as to be likely to deceive the members or the public.

(4) Where a trade union applying to be registered has been in operation for more than a year before the date of such application, there shall be delivered to the registrar before the registry thereof a general statement of the receipts, funds, effects, and expenditure of such trade union in the same form, and showing the same particulars, as if it were the annual general statement required as hereinafter mentioned to be transmitted annually to the registrar.

(5) The registrar upon registering such trade union shall issue a certificate of registry, which certificate, unless proved to have been withdrawn or canceled, shall be conclusive evidence that the regulations of this act with respect to registry have been complied with.

(6) One of Her Majesty's principal secretaries of state may, from time to time, make regulations respecting registry under this act, and respecting the seal (if any) to be used for the purpose of such registry, and the forms to be used for such registry, and the inspection of documents kept by the registrar under this act, and respecting the fees, if any, to be paid on registry, not exceeding the fees specified in the second schedule to this act, and generally for carrying this act into effect.

14. With respect to the rules of a trade union registered under this act, the following provisions shall have effect:

(1) The rules of every such trade union shall contain provisions in respect of the several matters mentioned in the first schedule to this act.

(2) A copy of the rules shall be delivered by the trade union to every person on demand on payment of a sum not exceeding one shilling [24 cents].

15. Every trade union registered under this act shall have a registered office to which all communications and notices may be addressed; if any trade union under this act is in operation for seven days with-

out having such an office, such trade union and every officer thereof shall each incur a penalty not exceeding five pounds [§24.33] for every day during which it is so in operation.

Notice of the situation of such registered office, and of any change therein, shall be given to the registrar and recorded by him; until such notice is given the trade union shall not be deemed to have complied with the provisions of this act.

16. A general statement of the receipts, funds, effects, and expenditure of every trade union registered under this act shall be transmitted to the registrar before the first day of June in every year, and shall show fully the assets and liabilities at the date, and the receipts and expenditure during the year preceding the date to which it is made out, of the trade union; and shall show separately the expenditure in respect of the several objects of the trade union, and shall be prepared and made out up to such date, in such form, and shall comprise such particulars, as the registrar may from time to time require; and every member of, and depositor in, any such trade union shall be entitled to receive, on application to the treasurer or secretary of that trade union, a copy of such general statement, without making any payment for the same.

Together with such general statement there shall be sent to the registrar a copy of all alterations of rules and new rules and changes of officers made by the trade union during the year preceding the date up to which the general statement is made out, and a copy of the rules of the trade union as they exist at that date.

Every trade union which fails to comply with or acts in contravention of this section, and also every officer of the trade union so failing shall each be liable to a penalty not exceeding five pounds [§24.33] for each offense.

Every person who willfully makes or orders to be made any false entry in or any omission from any such general statement, or in or from the return of such copies of rules or alterations of rules, shall be liable to a penalty not exceeding fifty pounds [§24.33] for each offense.

17. The registrars of the friendly societies in England, Scotland, and Ireland shall be the registrars under this act.

The registrar shall lay before Parliament annual reports with respect to the matters transacted by such registrars in pursuance of this act.

18. If any person with intent to mislead or defraud gives to any member of a trade union registered under this act, or to any person intending or applying to become a member of such trade union, a copy of any rules or of any alterations or amendments of the same other than those respectively which exist for the time being on the pretense that the same are the existing rules of such trade union, or that there are no other rules of such trade union, or if any person with the intent aforesaid gives a copy of any rules to any person on the pretense that such rules are the rules of a trade union registered under this act which is not so registered, every person so offending shall be deemed guilty of a misdemeanor.

LEGAL PROCEEDINGS.

19. In England and Ireland all offenses and penalties under this act may be prosecuted and recovered in manner directed by the summary jurisdiction acts.

In England and Ireland summary orders under this act may be made and enforced on complaint before a court of summary jurisdiction in manner provided by the summary jurisdiction acts.

Provided as follows:

(1) The "court of summary jurisdiction," when hearing and determining an information or complaint, shall be constituted in some one of the following manners; that is to say,

(a) In England (1) In any place within the jurisdiction of a metropolitan police magistrate or other stipendiary magistrate, of such magistrate or his substitute. (2) In the city of London, of the Lord Mayor or any alderman of the said city. (3) In any other place, of two or more justices of the peace sitting in petty sessions.

(b) In Ireland. (1) In the police district of Dublin metropolis, of a divisional justice. (2) In any other place, of a resident magistrate.

In Scotland all offenses and penalties under this act shall be prosecuted and recovered by the procurator fiscal of the county in the sheriff court under the provisions of the summary procedure act, 1864.

In Scotland summary orders under this act may be made and enforced on complaint in the sheriff court.

All the jurisdictions, powers, and authorities necessary for giving effect to these provisions relating to Scotland are hereby conferred on the sheriffs and their substitutes.

Provided that in England, Scotland, and Ireland—

(2) The description of any offense under this act in the words of such act shall be sufficient in law.

(3) Any exception, exemption, proviso, excuse, or qualification, whether it does or not accompany the description of the offense in this act, may be proved by the defendant, but need not be specified or negatived in the information, and if so specified or negatived, no proof in relation to the matters so specified or negatived shall be required on the part of the informant or prosecutor.

20. In England or Ireland if any party feels aggrieved by any order or conviction made by a court of summary jurisdiction on determining any complaint or information under this act, the party so aggrieved may appeal therefrom, subject to the conditions and regulations following:

(1) The appeal shall be made to some court of general or quarter sessions for the county or place in which the cause of appeal has arisen, holden not less than fifteen days and not more than four months after the decision of the court from which the appeal is made:

(2) The appellant shall, within seven days after the cause of appeal has arisen, give notice to the other party and to the court of summary jurisdiction of his intention to appeal, and of the ground thereof:

(3) The appellant shall immediately after such notice enter into a recognizance before a justice of the peace in the sum of ten pounds [\$48.67], with two sufficient sureties in the sum of ten pounds [\$48.67], conditioned personally to try such appeal, and to abide the judgment of the court thereon, and to pay such costs as may be awarded by the court:

(4) Where the appellant is in custody, the justice may, if he think fit, on the appellant entering into such recognizance as aforesaid, release him from custody:

(5) The court of appeal may adjourn the appeal, and upon the hearing thereof they may confirm, reverse, or modify the decision of the court of summary jurisdiction, or remit the matter to the court of

summary jurisdiction with the opinion of the court of appeal thereon, or make such other order in the matter as the court thinks just, and if the matter be remitted to the court of summary jurisdiction, the said last-mentioned court shall thereupon rehear and decide the information or complaint in accordance with the opinion of the said court of appeal. The court of appeal may also make such order as to costs to be paid by either party as the court thinks just.

21. In Scotland it shall be competent to any person to appeal against any order or conviction under this act to the next circuit court of justice or, where there are no circuit courts, to the high court of justice at Edinburgh, in the manner prescribed by and under the rules, limitations, conditions, and restrictions contained in the act passed in the twentieth year of the reign of His Majesty King George the Second, chapter forty-three, in regard to appeals to circuit courts in matters criminal, as the same may be altered or amended by any acts of Parliament for the time being in force.

All penalties imposed under the provisions of this act in Scotland may be enforced in default of payment by imprisonment for a term to be specified in the summons or complaint, but not exceeding three calendar months.

All penalties imposed and recovered under the provisions of this act in Scotland shall be paid to the sheriff clerk, and shall be accounted for and paid by him to the Queen's and Lord Treasurer's Remembrancer on behalf of the Crown.

22. A person who is a master, or father, son, or brother of a master, in the particular manufacture, trade, or business, in or in connection with which any offense under this act is charged to have been committed, shall not act as or as a member of a court of summary jurisdiction or appeal for the purposes of this act.

DEFINITIONS.

23. In this act the term summary jurisdiction acts means as follows:

As to England, the act of the session of the eleventh and twelfth years of the reign of Her present Majesty, chapter forty-three, entitled "An act to facilitate the performance of the duties of justices of the peace out of sessions within England and Wales with respect to summary convictions and orders," and any acts amending the same:

As to Ireland, within the police district of Dublin metropolis, the acts regulating the powers and duties of justices of the peace for such district, or of the police of such district, and elsewhere in Ireland, "the petty sessions (Ireland) act, 1851," and any act amending the same.

In Scotland the term "misdemeanor" means a crime and offense.

The term "trade union" means such combination, whether temporary or permanent, for regulating the relations between workmen and masters, or between workmen and workmen, or between masters and masters, or for imposing restrictive conditions on the conduct of any trade or business, as would, if this act had not passed, have been deemed to have been an unlawful combination by reason of some one or more of its purposes being in restraint of trade: *Provided*, That this act shall not affect—

(1) Any agreement between partners as to their own business;

(2) Any agreement between an employer and those employed by him as to such employment;

(3) Any agreement in consideration of the sale of the good-will of a business or of instruction in any profession, trade, or handicraft.

REPEAL.

24. The trades unions funds protection act, 1869, is hereby repealed. Provided that this repeal shall not affect—

(1) Anything duly done or suffered under the said act:
(2) Any right or privilege acquired or any liability incurred under the said act:

(3) Any penalty, forfeiture, or other punishment incurred in respect of any offense against the said act:

(4) The institution of any investigation or legal proceeding or any other remedy for ascertaining, enforcing, recovering, or imposing any such liability, penalty, forfeiture, or punishment as aforesaid.

FIRST SCHEDULE.

Of matters to be provided for by the rules of trade unions registered under this act.

1. The name of the trade union and place of meeting for the business of the trade union.

2. The whole of the objects for which the trade union is to be established, the purposes for which the funds thereof shall be applicable, and the conditions under which any member may become entitled to any benefit assured thereby, and the fines and forfeitures to be imposed on any member of such trade union.

3. The manner of making, altering, amending, and rescinding rules.

4. A provision for the appointment and removal of a general committee of management, of a trustee or trustees, treasurer, and other officers.

5. A provision for the investment of the funds, and for an annual or periodical audit of accounts.

6. The inspection of the books and names of members of the trade union by every person having an interest in the funds of the trade union.

SECOND SCHEDULE.

Maximum fees.

	£	s.	d.	
For registering trade union.....	1	0	0	[\$4. 87]
For registering alterations in rules.....	0	10	0	[\$2. 43]
For inspection of documents.....	0	2	6	[\$0. 61]

AN ACT to amend the trade union act, 1871 [30th June, 1876].

Whereas it is expedient to amend the trade union act, 1871:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This act and the trade union act, 1871, hereinafter termed the principal act, shall be construed as one act, and may be cited together as the "Trade Union Acts, 1871 and 1876," and this act may be cited separately as the "Trade Union Act Amendment Act, 1876."

2. Notwithstanding anything in section five of the principal act contained, a trade union, whether registered or unregistered, which insures or pays money on the death of a child under ten years of age shall be deemed to be within the provisions of section twenty-eight of the friendly societies act, 1875.

3. Whereas by section eight of the principal act it is enacted that "the real or personal estate of any branch of a trade union shall be vested in the trustees of such branch:" The said section shall be read and construed as if immediately after the hereinbefore recited words there were inserted the words "or of the trustees of the trade union, if the rules of the trade union so provide."

4. When any person, being or having been a trustee of a trade union or of any branch of a trade union, and whether appointed before or after the legal establishment thereof, in whose name any stock belonging to such union or branch transferable at the Bank of England or Bank of Ireland is standing, either jointly with another or others, or solely, is absent from Great Britain or Ireland respectively, or becomes bankrupt, or files any petition, or executes any deed for liquidation of his affairs by assignment or arrangement, or for composition with his creditors, or becomes a lunatic, or is dead, or has been removed from his office of trustee, or if it be unknown whether such person is living or dead, the registrar, on application in writing from the secretary and three members of the union or branch, and on proof satisfactory to him, may direct the transfer of the stock into the names of any other persons as trustees for the union or branch; and such transfer shall be made by the surviving or continuing trustees, and if there be no such trustee, or if such trustees refuse or be unable to make such transfer, and the registrar so direct, then by the accountant-general or deputy or assistant accountant-general of the Bank of England or Bank of Ireland, as the case may be; and the governors and companies of the Bank of England and Bank of Ireland respectively are hereby indemnified for anything done by them or any of their officers in pursuance of this provision against any claim or demand of any person injuriously affected thereby.

5. The jurisdiction conferred in the case of certain offenses by section twelve of the principal act upon the court of summary jurisdiction for the place in which the registered office of a trade union is situate may be exercised either by that court or by the court of summary jurisdiction for the place where the offense has been committed.

6. Trades unions carrying or intending to carry on business in more than one country shall be registered in the country in which their registered office is situate; but copies of the rules of such unions, and of all amendments of the same, shall, when registered, be sent to the registrar of each of the other countries, to be recorded by him, and until such rules be so recorded the union shall not be entitled to any of the privileges of this act or the principal act, in the country in which such rules have not been recorded, and until such amendments of rules be recorded the same shall not take effect in such country.

In this section "country" means England, Scotland, or Ireland.

7. Whereas by the "life assurance companies act, 1870," it is provided that the said act shall not apply to societies registered under the acts relating to friendly societies: The said act (or the amending acts) shall not apply nor be deemed to have applied to trade unions registered or to be registered under the principal act.

8. No certificate of registration of a trade union shall be withdrawn or cancelled otherwise than by the chief registrar of friendly societies, or in the case of trade unions registered and doing business exclusively in Scotland or Ireland, by the assistant registrar for Scotland or Ireland, and in the following cases:

(1) At the request of the trade union to be evidenced in such manner as such chief or assistant registrar shall from time to time direct.

(2) On proof to his satisfaction that a certificate of registration has been obtained by fraud or mistake, or that the registration of the trade union has become void under section six of the trade union act, 1871, or that such trade union has willfully and after notice from a registrar whom it may concern, violated any of the provisions of the trade union acts, or has ceased to exist.

Not less than two months previous notice in writing, specifying briefly the ground of any proposal, withdrawal, or cancelling of certificate (unless where the same is shown to have become void as aforesaid, in which case it shall be the duty of the chief or assistant registrar to cancel the same forthwith) shall be given by the chief or assistant registrar to a trade union before the certificate of registration of the same can be withdrawn or cancelled (except at its request).

A trade union whose certificate of registration has been withdrawn or cancelled shall, from the time of such withdrawal or cancelling, absolutely cease to enjoy as such the privileges of a registered trade union, but without prejudice to any liability actually incurred by such trade union, which may be enforced against the same as if such withdrawal or cancelling had not taken place.

9. A person under the age of twenty-one, but above the age of sixteen, may be a member of a trade union, unless provision be made in the rules thereof to the contrary, and may, subject to the rules of the trade union, enjoy all the rights of a member except as herein provided, and execute all instruments and give all acquittances necessary to be executed or given under the rules, but shall not be a member of the committee of management, trustee, or treasurer of the trade union.

10. A member of a trade union not being under the age of sixteen years may, by writing under his hand, delivered at, or sent to, the registered office of the trade union, nominate any person not being an officer or servant of the trade union (unless such officer or servant is the husband, wife, father, mother, child, brother, sister, nephew, or niece of the nominator), to whom any moneys payable on the death of such member, not exceeding fifty pounds [~~\$243.33~~] shall be paid at his decease, and may from time to time revoke or vary such nomination by writing under his hand similarly delivered or sent; and on receiving satisfactory proof of the death of a nominator, the trade union shall pay to the nominee the amount due to the deceased member not exceeding the sum aforesaid.

11. A trade union may, with the approval in writing of the chief registrar of friendly societies, or in the case of trade unions registered and doing business exclusively in Scotland or Ireland, of the assistant registrar for Scotland or Ireland, respectively, change its name by the consent of not less than two-thirds of the total number of members.

No change of name shall affect any right or obligation of the trade union or of any member thereof, and any pending legal proceedings may be continued by or against the trustees of the trade union or any other officer who may sue or be sued on behalf of such trade union, notwithstanding its new name.

12. Any two or more trade unions may, by the consent of not less than two-thirds of the members of each or every such trade union, become amalgamated together as one trade union, with or without any dissolution or division of the funds of such trade unions, or either or

any of them; but no amalgamation shall prejudice any right of a creditor of either or any union party thereto.

13. Notice in writing of every change of name or amalgamation signed, in the case of a change of name, by seven members, and countersigned by the secretary of the trade union changing its name, and accompanied by a statutory declaration by such secretary that the provisions of this act in respect of changes of name have been complied with, and in the case of an amalgamation signed by seven members and countersigned by the secretary of each or every union party thereto, and accompanied by a statutory declaration by each or every such secretary that the provisions of this act in respect of amalgamations have been complied with, shall be sent to the central office established by the friendly societies act, 1875, and registered there, and until such change of name or amalgamation is so registered the same shall not take effect.

14. The rules of every trade union shall provide for the manner of dissolving the same, and notice of every dissolution of a trade union under the hand of the secretary and seven members of the same shall be sent within fourteen days thereafter to the central office hereinbefore mentioned, or, in the case of trade unions registered and doing business exclusively in Scotland or Ireland, to the assistant registrar for Scotland or Ireland, respectively, and shall be registered by them: *Provided*, That the rules of any trade union registered before the passing of this act shall not be invalidated by the absence of a provision for dissolution.

15. A trade union which fails to give any notice or send any document which it is required by this act to give or send, and every officer or other person bound by the rules thereof to give or send the same, or if there be no such officer, then every member of the committee of management of the union, unless proved to have been ignorant of, or to have attempted to prevent the omission to give or send the same, is liable to a penalty of not less than one pound [\$1.87] and not more than five pounds [\$24.33] recoverable at the suit of the chief or any assistant registrar of friendly societies, or of any person aggrieved, and to an additional penalty of the like amount for each week during which the omission continues.

16. So much of section twenty-three of the principal act as defines the term trade union, except the proviso qualifying such definition, is hereby repealed, and in lieu thereof be it enacted as follows:

The term "trade union" means any combination, whether temporary or permanent, for regulating the relations between workmen and masters, or between workmen and workmen, or between masters and masters, or for imposing restrictive conditions on the conduct of any trade or business, whether such combination would or would not, if the principal act had not been passed, have been deemed to have been an unlawful combination by reason of some one or more of its purposes being in restraint of trade.

LAND VALUES AND OWNERSHIP IN PHILADELPHIA.

BY A. F. DAVIES.

For a study in growth of value and change in distribution of land within a territory illustrating urban development, Philadelphia offers a better field than any other American city. This is, first, because of its history and physiography. Its origins are not obscured. The city was plotted and established according to a settled plan. Subdivision of the area and change of ownership have been subjects of record from the first. As the space limits set by the founder expanded under the pressure of growth they met no obstacles in the conformation of the adjacent districts. Like Berlin, Moscow, or St. Louis, Philadelphia is a city of riparian situation, capable of facile expansion in every direction. Consequently its use of land under the pressure of increasing population is free from such physical hindrances as have complicated or may complicate expansion in cities differently situated—Boston, New York, or Chicago, for example, or St. Petersburg, with the water blocking growth in one direction, or Duluth, to instance the additional difficulties of a hillside and terrace location, or Paris, set on an island and restrained through generations by exigencies of military defense from free growth beyond its limits—while the action of these same hindrances in condensing the population and driving values upward has been lacking, giving the problem in Philadelphia a comparatively simple form. For some two hundred and twenty-five years the process of growth has gone on until 29 square miles of unimproved land has become a modern city. New territory has been added to the plot of the original city, but geographically and logically the additions have been no less “city” than the city itself, and the changes have been formal rather than real.

On October 25, 1701, William Penn granted Philadelphia as a city its first charter. Twenty years earlier the first surveys of the original city had been begun, and for seventeen years the settlement had existed as a borough. This first city charter remained in force up to 1789, when a new charter was granted, which, with supplements, was operative until 1854, in which year it was modified and extended by the act of consolidation.

The area of the original town and borough, as of the city, was fixed, extending from the Delaware to the Schuylkill, 2 miles, and in breadth,

north and south, 1 mile. There was thus an area of 2 square miles, or 1,280 acres, offering, to the mind of the proprietary, abundant opportunity for expansion. The growth of the first year, to a village of "about four score houses and cottages," gave great satisfaction to those interested in the province. In Hazzard's Register a table of taxables for the city and the county of Philadelphia, compiled in 1828 from the records of the county commissioners, indicates approximately the rate of growth within the city and the county of Philadelphia from 1720 to 1828.

TAXABLE PROPERTY IN THE CITY AND THE COUNTY OF PHILADELPHIA, 1720 TO 1828.

Years.	City.	County.	Total.
1720.....			\$1,195
1740.....			4,850
1751.....			7,100
1760.....	\$2,634	\$5,687	8,321
1771.....	3,751	6,704	10,455
1779.....	3,681	7,066	10,747
1796.....	4,876	4,516	9,392
1799.....	7,068	6,885	13,953
1800.....	6,625	7,919	14,544
1807.....	7,813	9,055	16,868
1814.....	9,383	10,486	19,869
1821.....	12,696	15,196	27,892
1828.....	16,556	20,750	37,306

Leaving out of account the irregularities supposedly due to the Revolutionary war and to the prevalence of fevers in the city between 1793 and 1800 this table shows a century of fairly uniform growth. In conjunction with the population table constructed from Doctor Mease's estimates and the United States Census given in the table immediately following, covering the years 1753 to 1850, it indicates the characteristic development of Philadelphia, namely, a steady increase of population, manufactures, and other business on the stable basis of a body of citizens very largely above the tax-paying line of responsibility.

Seventy-eight years after the first borough organization of Philadelphia, the legislature began the incorporation of districts adjoining the city for the government of their local affairs. This course was continued for ninety-one years, nine corporate districts being added in that time, as follows:

Southwark, March 26, 1762; Northern Liberties, March 9, 1771; Moyamensing, March 24, 1812; Spring Garden, March 22, 1813; Kensington, March 6, 1820; Penn, February 28, 1844; Richmond, February 27, 1847; West Philadelphia, April 3, 1851; Belmont, April 14, 1853.^(a)

In 1853 the city had been far outstripped in area, population, taxables, and real estate values by the surrounding districts and the rate of

^a Price, History of the Consolidation of the City of Philadelphia.

advance was overwhelmingly in their favor, as illustrated by the following tables:

POPULATION OF THE CITY AND OF THE CITY AND COUNTY OF PHILADELPHIA AT
VARIOUS YEARS, 1753 TO 1850.

[Figures in this table are from Price's History of the Consolidation of the City of Philadelphia.]

Year.	City.	City and county.	Year.	City.	City and county.
1753	a 14,563	.....	1810	53,722	111,210
1760	a 18,756	.....	1820	63,802	135,637
1769	a 28,043	.....	1830	80,462	188,797
1790	b 28,522	54,391	1840	98,665	256,037
1800	41,220	81,009	1850	121,376	406,762

a According to Dr. Mease's statement.

b United States Census.

TAXABLE INHABITANTS OF PHILADELPHIA AND ADJOINING DISTRICTS IN 1853.

[Figures in this table are from Price's History of the Consolidation of the City of Philadelphia.]

City and districts.	Number.	City and districts.	Number.
Philadelphia	22,024	Spring Garden	12,817
Southwark	8,193	Kensington	11,563
Moyamensing	6,153	Penn.	3,658
Passayunk	335	Boroughs and townships north of city	11,382
Northern Liberties	9,130		

VALUATION OF REAL ESTATE IN PHILADELPHIA AND ADJOINING DISTRICTS, 1844
AND 1853.

[Figures in this table are from Price's History of the Consolidation of the City of Philadelphia.]

City and districts.	1844.	1853.	Per cent of in- crease.
Philadelphia	\$57,708,858	\$66,497,465	15.2
Southwark	5,367,581	6,036,047	12.5
Moyamensing	2,323,210	3,838,791	65.2
Northern Liberties	9,056,948	9,637,466	6.4
Spring Garden	9,149,604	15,128,817	65.3
Kensington	3,798,508	7,148,502	88.4
Other districts, boroughs, and townships	12,893,513	19,931,570	54.6
Total	100,293,222	128,218,658	27.8

The multiplication of corporate civic bodies in what was practically a continuous population was harmful and wasteful.^(a)

In Philadelphia County, the smallest county in the State, there were some forty corporate or quasi-corporate bodies making executive laws and managing public affairs in twenty-nine independent territorial divisions. "With no paramount or pervasive power of legislation or control, no laws, uniformly operative over the whole, could be adopted or executed beyond the respective bounds of each (local government). Rioters suppressed within one jurisdiction take refuge and find impunity within another. Measures of public improvement by the city or respective districts are arrested at each extreme of their narrow limits;

^a It was estimated that the improved method of collecting taxes in the consolidated city saved about \$100,000 per annum to the taxpayers.

and works erected competent to supply the wants of all with but slight additional expense are curtailed of their usefulness, and other works at large expense uselessly erected by other corporations. The varying laws of so many localities in close contiguity are so numerous and so little known that the citizens in their hourly movements are subjected to legal obligations and powers of which they have no knowledge. These divisions and unseen lines and complications of powers are potential alike to paralyze or arrest every effort to advance the common welfare and to suppress general evils."^(a)

Philadelphia County under these conditions was an earthly paradise for the citizens seeking a municipal job. The heavy reductions anticipated in the number of municipal employees had much to do with the delay of consolidation and the consequent loss of standing to the city. Nearly ten years of agitation were needed to secure the legislation which ended this condition and brought into one commonwealth this group of jealous and reciprocally injurious neighbors.

The act of consolidation, which became a law February 2, 1854, made the area of the city and county coterminous, brought it under a unified municipal control, and thus made possible a future of growth and power. From the passing of the act of consolidation to 1900 the city had nearly half a century during which her area was unchanged. Her record of taxation was continuous, and there occurred, with the exception of the celebration in 1876 of the Centennial of the Declaration of Independence, no circumstances peculiar to the city to disturb normal growth in population, industries, and values. This period, 1855 to 1900, has been selected for this study of various aspects of the conditions and tendencies of real estate.

The data embodied in the tables were found in the assessors' books, which list all property, taxable and exempt, giving valuation for taxation, areas, and names of owners. Properties exempt from taxation were not included in the tables. Decennial periods were taken as the points for examination, beginning with 1855, the first year of taxation under consolidation. The figures given for the population have been calculated by the usual method for intercensal years. The books of 1855 are damaged slightly, and in 1855 and 1865 many areas are unrecorded. In some cases, no very great number, the owners are reported "unknown." Cases of doubtful identity, such as "John Smith," etc., have been lumped with the unknown owners.

By a legislative act of March 14, 1865, the board of revision of taxes was created. That act, as amended in 1867, provides that the court of common pleas shall appoint three persons who shall compose the board of revision of taxes. They have the power to equalize assessments by raising or lowering valuations, either in individual cases or by wards:

^a Price, *History of Consolidation of the City of Philadelphia*.

to rectify all errors; make valuations when they have been omitted; require the attendance of assessors or other citizens for examination, and hear all the appeals and applications of the taxpayers, subject to an appeal to the court of common pleas, whose decision shall be final. The assessors are appointed by the board of revision of taxes for the term of five years. Their duty is to ascertain the dimensions and quantity of each lot or piece of ground assessed and return the same with their assessment. Each assessor is also required to ascertain the proper orthography of the name of each taxable person within the district assigned to him; the exact number of the residence of such person; his occupation, profession, or business, and to state plainly all such particulars in the assessment list. A method of obtaining this information is provided by an act of 1865 which established a registry bureau, in which the description of all real estate and the names of the owners thereof shall be registered and plotted in plan books, so that accurate descriptions of the same and the names of the present owners may be obtained.

Previous to 1865 the assessors were elected by the people, the records were scanty and unreliable, and no definite or consistent policy as to basis of valuation was followed. The establishment of a board of revision of taxes, which should be appointed by the court of common pleas, and which should in turn appoint the assessors and control their work, was supposed to assure honest and consistent work in taxation, a thorough and centralized system of records, and freedom from the domination of machine political interests. In general it is true that the board of revision of taxes has put the taxes of the city on a far more satisfactory basis than had been secured before its organization.

In 1865 the board appointed the assessors, but this did not affect the work of that year. Up to 1885 the work of the assessors was somewhat irregular, and the basis of valuation varied. Sometimes two-thirds of the value was taken, sometimes the full value. Inexact estimates and no little fraud marked the years preceding 1885. Since and including 1885 the board has had a fairly fixed policy. The law requires property to be listed at such a valuation as it would bring at public sale after due notice. The purpose of the law is clearly to tax real estate at its true value, the principle of taxation which obtains in Massachusetts and toward which the older and more developed States of the eastern seaboard are evidently tending. In order to avoid the danger of too high a level of valuation and consequent ground of complaint on the part of owners, the board attempts to list the taxable value of property at 80 per cent of an estimated fair to outside price. These estimates are roughly made, and experience shows that the tendency of valuations to move downward is well nigh universal, but it is probable that, with the exception of very valuable properties,

errors balance in the mass, and in the main from 60 to 80 per cent of the true value of real estate is taxed.^(a)

This is regarded by the board of revision of taxes as some increase over the level of valuation from 1875 to 1885 and a great increase over that of the fifties and sixties, while the reliability and uniformity of the records are of far higher grade after than before 1885. Although the percentage of the true value subjected to taxation seems to fall considerably below the intent of the law, it is, relatively to the practices of other cities, at a high level. Great variations in systems of levy and keeping of accounts make accurate comparison of different places impossible, but certain general statements may be made which bring into clearer view the ranking of the city under particular consideration. In New York, for example, taxation has been based upon 60 per cent of the nominal value of real estate. The experience of many years shows that this is about the maximum that can be borrowed upon real estate security, and hence 60 per cent may be regarded as theoretically the actual value in all contingencies. In Boston taxation is based on actual value. In Chicago some astonishing history has been made in the record of valuation. Under a law calling for assessments based on true value, every form of tax corruption grew up. The wealthy tax dodger and tax fixer set the pace for the taxables of moderate means. Every pressure was used on the assessors, who were elected officers, in the interest of undervaluation. The average valuation for the assessment of Chicago property dropped to the level of 10 per cent of its real value.

In 1895 a report of the Illinois Bureau of Labor Statistics, dealing with the subject of taxation, gives a list of properties in which the assessors' valuation ranges from 4 to 12 per cent of true valuation as based upon actual sales and the opinions of real estate dealers. In Cook County (practically Chicago) the assessment valuation of real estate in 1893 dropped more than \$18,000,000 below the valuation in 1873. A reform was wrought, after long agitation, by changes in the law dealing with the methods of assessment. The assessing powers were taken from the townships and given to a small body of county assessors. A fixed ratio was established between actual value and assessment valuation, making the latter one-fifth of the former, which was defined as the price to be expected at voluntary sale, and the publicity of tax lists was provided for. This last point guards against inequalities of valuation, which is a matter of far greater significance

^a In the assessors' valuations of the current year, 1903, the attempt is being made to list the full values of property with the purpose of lowering the tax rate from \$1.85 to \$1.50. The lists can not be regarded as reliable or consistent in any high degree, though they undoubtedly bring a large number of properties of high value far nearer their proper relative position in the scale of taxable values.

than the percentage of true value subjected to taxation. In Chicago the general drop to a level of valuation that made the support of the city government increasingly difficult was due to the demand from small owners that their modest holdings should be listed at a percentage of value no higher than that enjoyed by the larger owners. If a million-dollar hotel could secure a valuation of only \$6,000 above its bonded debt, or a manufacturing company with a capital stock of \$54,000,000 could escape taxation except on an assessment valuation of \$1,500,000, the numerous holders of values ranging from \$1,000 to \$50,000 argued, *pari passu*, that their burdens should be light. Practical means of convincing the assessors being found, there followed easily and promptly the disastrous fiscal results already described.

In the whole problem of real estate as the basis of governmental revenue, the element most deserving study and demanding most careful scientific treatment is this element of valuation. Let the percentage of value taxable be as low or as high as the needs of time and place and the demands for public improvements seem to justify. But there must be developed in the interest of social well-being, some system of valuation which shall assure uniformity; so that every person and corporation shall assume a burden of taxation in proportion to the value of his, hers, or its property, and shall reduce favoritism and bribery to the lowest possible terms. The law, says the old jurist, should make it as easy as possible to do right and as difficult as possible to do wrong. The tax law should be framed on this principle. Unless practical measures of this quality are discoverable the taxing systems of our States and cities, designed for the nourishment and upbuilding of the bony structure of public finance, and acting, after a poor fashion, to this end, must be classed as diseased organs of the social body, which, because of their moribund condition, slowly poison all the surrounding tissue. A body of citizens among whom a man who voluntarily makes honest tax returns is regarded as a fool can not be classed as the highest embodiment of American ideals, and it is hardly to be denied that this point has been reached in more than one municipality.

The system of valuation in St. Paul, Minn., shows the best example available in American cities of an effort to reach the root of the valuation trouble. For this system the claim is made that it comes nearer than any other to giving the actual cash value of all realty. The city is districted and every two years an assessment is made. Each district has a volunteer commission of property owners and experts in values familiar with the district. The commission takes a block at a time and sets a value for one property on each street bounding the block. The value of each of the remaining properties is determined by its mathematical ratio to the standard lots. The commission notes the valuation and the legal description of the properties. After the commission has finished this work the assessors are sent out and make their valuation on each lot. The owner is then required to file a statement of what be

considers the fair selling price of his property. The board of assessors thus gains three independent estimates on which to base the final valuation. If the board decides to raise or lower the valuation of any given property, the other lots in the same block must undergo a proportionate change. Improvements are listed with full descriptions by the deputy assessors, and the board has the services of a special committee of contractors and architects to help it in fixing the valuation. These valuations are then compared with the owners' statements, and discrepancies are adjusted before the final figures are reached.

Three wards, believed to be fairly typical of the city of Philadelphia in general, were chosen as the basis of this study—Wards 1, 8, and 24. In 1889 Ward 24 was divided, a large western section being formed into Ward 34. In 1898 Ward 1 was divided, making Ward 39 of its southern portion. Consequently the area of Wards 1, 8, 24, 34, and 39 was covered by the inquiry. These five wards had an area of 10,280 acres, or 12 per cent of the total area of the city. Their population in 1890 was 13 per cent, and in 1900 15 per cent of the total population of the city. Their real estate in 1885 was valued, for purposes of taxation, at \$81,208,005 and in 1900 at \$163,108,018, or 14 per cent and 19 per cent of the total valuation of the taxable real estate of the city for the same years, which was, respectively, \$587,749,828 and \$879,295,355. Thus, roughly speaking, for the last third of our selected time period the material presented in the tables covered between 12 and 19 per cent of the city in area, population, and taxable real-estate values.

In physiographic character these wards ranged from land over which the tide ebbed and flowed to that lying 100 feet above sea level. Nearly two-thirds of Ward 39 in 1900 was subject to overflow by the tide, because of the breaking of the sluice gates or the embankment which protected its river frontage for some miles along the Delaware. A considerable amount of filling had been done and the made land, mainly along the river, was used or held for the future, chiefly by manufacturing interests. The work of filling and draining League Island Park had been begun. This park lay at the extreme southern limit of the city and comprised some 300 acres of land of which about one-third lay within the limits of Ward 39. It was intersected by Broad street, the western boundary of Ward 39, which was continued by a bridge to the navy-yard on League Island. The proposed improvement of the southern end of Broad street and the park involved filling, in many places, to the depth of 16 feet. No part of Wards 1 and 39 reached the 40-foot line of elevation. Ward 8 reached an elevation of nearly 60 feet, dropping below 40 feet toward its ends, while Wards 24 and 34 rose from 20 feet near the Schuylkill frontage to 100 feet toward the city line, their western boundary.

The vital statistics of the city give these wards a very fair ranking as compared with the rest of the city. Even Ward 39, with its low level, drawing its water supply in the lower section from shallow

wells which seemed mere stand holes for the river water, had a fair health record and was said to be growing perceptibly less malarial with the passing years.

In social and civic characteristics and in general lines of economic development, the five wards show great variation. The oldest of them, Ward 8, lies in the heart of old Philadelphia. It contains some of the most valuable business properties of the city, and to the west and south of the commercial section lies the fashionable residence quarter, of which Rittenhouse Square may be taken as the center. The public side of the complex life of the well-to-do largely centers in this ward. Hotels, theaters, churches, schools and colleges, libraries, political and social clubs of men and of women, scientific societies, banks, fashionable shops, the administrative offices of missions and charities—all these have grown up in Ward 8 in a body of residents long native to the city, and have brought with them rapid increase in values, a gradual lessening of the population, and in the last fifteen years a slight decrease in the number of holders.

When the city was first settled Ward 1 consisted of marsh and natural meadow, bearing a plentiful growth of forest timber and underwood. During the years of clearing and semicultivation it became a serious menace to the health of the southern end of the city, but a fuller cultivation of the soil in the development of grazing and garden lands rescued the city from the poisonous exhalations of "The Neck." For many years before the railroads gave transportation for live stock or refrigeration for food stuffs this section furnished grazing for cattle brought on foot from farther west. Here they were rested and fattened for the local market. The change to railway transportation for cattle from western grazing lands to eastern markets brought to Ward 1 a serious shrinkage in values, from which it gradually recovered in the development of market gardening and the advance of the line of city improvements.

At the time of consolidation Ward 1 was almost all farm land. Business and residence building had crept down the line of the river front and had begun to push southward on Eighth street. It was evident that this section of the city would belong to the commercial and manufacturing interests and to a humble working-class population. The increase in the population and the number of holders was steady throughout the whole period, but the early promise in lines of manufacture was not fulfilled, the growth in industry finding its outlet more largely in the northern and northeastern than in the southern sections of the city. The northern portion of the old First Ward in 1900 was continuously built up with modest houses and shops. Its residents were mainly thrifty working people and small business men, and it was fairly supplied with churches and public schools, although other provision for the social and intellectual life of the people was little in evidence. The earlier native population had become nearly one-fourth foreign through

the heavy immigration from Europe, which began to flow into the city in the eighties, and this increase of foreigners was considered to have a depressing effect on real estate values. In Ward 39 only about one-fourth of the total area was improved. Some farms were under partial cultivation; a few small and wretched settlements of colored people were found, planted for speculative purposes and left to deteriorate; in the semimarsch lands toward the south had developed piggeries, maintained contrary to city ordinance, but winked at by the authorities, which serve as a profitable dumping ground for much of the city's garbage. The population belonging to this section seemed depressed and degenerate, isolated from almost every stimulating social and educational opportunity. The land, notwithstanding, was held at high values and was mainly in the hands of holders who could afford to wait for the growth of the encroaching city. Two railroads, the Pennsylvania and the Baltimore and Ohio, had sent their lines southward and eastward through "The Neck," and these, with the extended water front, made it reasonable to anticipate commercial and manufacturing demands that would repay long waiting.

The area of the present Wards 24 and 34 in 1855 was largely farm land and country places. While these wards in 1900 had manufactures worth millions of dollars in value of annual output, their characteristic development had been as residence quarters, having the usual supply shops lining certain streets and meeting local needs. The proximity of Fairmount Park insured the popularity of this section among the well-to-do, while at the western limit had come suburban development of a high class. Between these districts a large middle and working-class residence section was found, with a considerable amount of open land held for future improvement. About three-fourths of the population were native white Americans, and the supply of churches, schools, and other resources for communal activities was fairly commensurate with the population and prosperity of these wards. The following table shows the race distribution in Wards 24 and 34, Wards 1 and 39, and Ward 8, according to the United States census reports for 1890 and 1900:

RACE DISTRIBUTION IN SELECTED WARDS, 1890 AND 1900.

Year and nativity.	Wards 1 and 39.		Ward 8.		Wards 24 and 34.	
	Popula- tion.	Per cent of total.	Popula- tion.	Per cent of total.	Popula- tion.	Per cent of total.
1890.						
Native white	42,117	78.2	9,455	55.7	51,609	77.9
Foreign white	10,940	20.3	4,485	26.4	12,619	19.0
Colored	825	1.5	3,031	17.9	2,049	3.1
Total	53,882	100.0	16,971	100.0	66,277	100.0
1900.						
Native white	60,365	77.1	9,732	61.8	77,999	80.5
Foreign white	16,329	20.9	3,534	22.4	14,869	15.3
Colored	1,602	2.0	2,491	15.8	4,048	4.2
Total	78,296	100.0	15,757	100.0	96,906	100.0

Throughout the city the story of the development of residential quarters must be written in terms of two and three story houses. The city was originally laid out in generous squares, and it was proposed that improvements should be confined to their four fronts. The interior portions, unoccupied by buildings, were for yards and garden and the free circulation of air. The subdivision of squares was forbidden, however, nor were regulations established for its limitation and control. For nearly a century from the granting of the first charter the location and width of streets opened by individual owners of land, the water supply, drainage and sewer connection, paving material of construction, and so on, were left practically unregulated by public enactment. There followed inevitably the small street, alley, and court which have been profitable financially to real estate holders and have made occupancy and ownership of separate houses a characteristic of the life of Philadelphia, but which have brought troublesome and enduring problems of physical and moral sanitation. As the population increased the demand for small houses grew up and the streets and alleys of narrow dimensions were multiplied. By an act of 1805, all streets, alleys, courts, and lanes which had been opened by private persons within the city, provided the same were not less than 20 feet wide, were declared to be in all respects public highways and were thus subject to the regulation and control of councils as to paving and cleaning. As it is possible to find alleys less than 2 feet in width, it is easily seen that before the middle of the nineteenth century the cupidity or thrift of individual owners had sufficient latitude to develop the network of narrow streets which embody the housing problem of the city. Their curious variety of little dwellings; their limited water supply; their surface drainage, foully odorous in hot weather; their miniature glaciers in cold, disgustingly mussy always; their low, some open privy vaults, which, even when "well cared for" and technically "nuisances," furnish air heavy with putridity as the dwelling portion of thousands of the city's inhabitants for at least three-fourths of the year—these suggest that the problems of practical sanitation are the crux of the housing question in Philadelphia rather than the congestion of the population within narrow geographical limits. Parallel with this development of streets well fitted to become "slums" there came a better class of building for the homes of moderately circumstanced citizens and for those of greater wealth of the simple habits and unostentatious living which has prevailed throughout the greater part of the history of the city.

On January 1, 1900, the total number of dwellings in Philadelphia could be listed as follows:

One-story dwellings	380
Two-story dwellings.....	129, 504
Three-story dwellings.....	123, 022
Four-story dwellings.....	5, 699
Five-story dwellings.....	79
Total	258, 684

Of these nearly 5 per cent were old frame dwellings antedating the modern building laws. Almost all the rest were of the usual red brick. In the newer parts of the city, after 1885, these were put up in blocks by speculative builders for immediate sale, and the quality of construction found in them was none too good. The progress and fluctuations in this operative building in Wards 1, 39, 24, and 34 are here shown for 15 years:

TWO AND THREE STORY HOUSES ERECTED IN WARDS 1 AND 39, 24 AND 34, AND IN THE ENTIRE CITY OF PHILADELPHIA, 1887 TO 1901.

Year.	Wards 1 and 39.		Wards 24 and 34.		Total selected wards.	Entire city.		
	Two-story.	Three-story.	Two-story.	Three-story.		Two-story.	Three-story.	Total.
1887.....	204	20	252	132	608	4,569	1,629	6,198
1888.....	270	21	390	172	853	5,987	1,436	7,423
1889.....	580	29	628	219	1,456	7,450	1,992	9,442
1890.....	1,062	40	695	311	2,108	7,301	1,958	9,259
1891.....	368	35	378	187	968	4,632	1,343	5,975
1892.....	503	75	432	225	1,235	5,110	1,744	6,854
1893.....	203	20	141	245	609	3,881	1,737	5,618
1894.....	322	63	424	239	1,048	3,905	2,001	5,906
1895.....	563	174	186	331	1,254	4,491	2,612	7,103
1896.....	393	15	793	264	1,465	5,040	1,760	6,800
1897.....	613	22	1,192	280	2,107	5,490	1,561	7,051
1898.....	142	20	769	346	1,277	3,685	1,373	5,058
1899.....	25	1	478	52	556	2,772	798	3,570
1900.....	2	4	355	156	516	2,302	775	3,077
1901.....	219	26	826	228	1,299	3,625	939	4,564
Total.....	5,469	565	7,939	3,386	17,359	70,240	23,658	93,898

The devotion to dwellings of this type to be used by single families has not prevented congestion of the population in the older parts of the city, where the three-story houses have been adapted to tenement-house methods of life. A lack of clear definition of tenement use and lax requirements as to alterations when an ordinary dwelling is converted to such use make the transformation inexpensive and speculatively attractive. European immigrants, in their early years of American life, are not exacting as to space and improvements; house overcrowding is frequent and rental values go up, though in general selling values seem to depreciate. This is because the immigrant, while willing to pay a high rent, will not pay a high purchase price. He is the only buyer in the market in a large number of cases. The owners whom he and his kind displace as respects residence must sell as they move and can sell only to him at a price which he makes. The taste for privacy in the older population and the rapid construction of small houses has served, however, to keep the ownership of his own home a common, practicable ideal to the man earning wages or on a small,

fixed income, in that values have been kept within extremely reasonable bounds, while the development of numerous building and loan associations, (^a) ready to make loans repayable upon easy terms, have fostered by easily gratifying the desires of small holders.

Compare with the figures given above for the selected wards the following statement of building operations in the whole city for the same time. We include here four-story dwellings, while the "total new buildings" column includes all industrial buildings—warehouses, dye and dry houses, factories, engine and boiler houses, breweries and bottling houses, foundries and shops—as well as special buildings, such as hospitals, apartment houses, etc.:

CONSTRUCTION OF BUILDINGS IN PHILADELPHIA, 1887 TO 1901.

Year.	Two-story.	Three-story.	Four-story.	Total two to four story.	Total new buildings.	Total two to three story.	Per cent of two to three story of total new buildings.
1887.....	4,569	1,629	3	6,201	6,784	6,198	91.4
1888.....	5,967	1,436	14	7,437	8,262	7,423	89.8
1889.....	7,450	1,992	34	9,476	10,250	9,442	92.1
1890.....	7,301	1,958	22	9,281	10,136	9,259	91.3
1891.....	4,632	1,343	12	5,987	6,738	5,975	88.7
1892.....	5,110	1,744	12	6,866	7,611	6,854	90.1
1893.....	3,881	1,737	14	5,632	6,255	5,618	89.8
1894.....	3,906	2,001	16	5,922	6,563	5,906	90.0
1895.....	4,491	2,612	31	7,134	7,540	7,103	94.2
1896.....	5,040	1,760	33	6,833	7,115	6,800	95.6
1897.....	5,490	1,561	23	7,074	7,344	7,051	96.0
1898.....	3,685	1,373	16	5,074	5,353	5,058	94.5
1899.....	2,772	798	19	3,589	3,877	3,570	92.1
1900.....	2,302	775	18	3,095	3,399	3,077	90.6
1901.....	3,625	939	26	4,590	5,082	4,564	90.7
Total	70,240	23,658	293	94,191	102,259	93,896	91.8

The great importance of the small holder in the Philadelphia real-estate market is evident. The demand for two-story dwellings has made them 68.7 per cent of the total number of buildings erected, while the inclusion of three-story dwellings shows 91.8 per cent of the total buildings as the proportion destined in large part for sale to the householder of moderate income. The following table shows that the

^a It was in Frankford, which is now a part of Philadelphia, that the first building society of the United States was organized in 1831. In 1892 an investigation conducted by the United States Government showed something over 450 as the number of such societies in Philadelphia. A statement constructed by Mr. Michael J. Brown, former president of the Building Association League of the United States, covers practically the time of the existence of building societies in the city, and shows, as nearly as possible, the number of properties acquired by members in Philadelphia through their societies. A period of sixty-two years is divided into ten parts as follows: 10 years, homes acquired, 100; 10 years, homes acquired, 480; 6 years, homes acquired, 1,200; 6 years, homes acquired, 2,400; 6 years, homes acquired, 4,800; 6 years, homes acquired, 9,600; 6 years, homes acquired, 14,400; 6 years, homes acquired, 19,200; 6 years, homes acquired, 24,000; 62 years, homes acquired, 76,180.

average number of real-estate transfers in Philadelphia for the same time, excluding the year 1887, has been 13,287:

REAL ESTATE TRANSFERS IN PHILADELPHIA, 1888 TO 1901.

Year.	Number.	Amount.	Year.	Number.	Amount.
1888	12,679	\$62,663,201.87	1897	12,876	\$78,117,354.46
1889	15,945	80,225,270.88	1898	11,880	65,644,095.54
1890	15,571	82,879,105.22	1899	11,960	63,835,684.67
1891	14,204	71,875,876.33	1900	12,160	62,752,733.57
1892	13,374	79,079,818.00	1901	13,195	84,339,888.19
1893	12,965	72,777,192.51			
1894	12,137	64,597,185.40	Total	186,018	1,026,998,394.13
1895	13,336	83,758,342.37	Annual average.	13,287	73,357,028.15
1896	13,746	74,457,645.12			

Although classes of transfers have not been discriminated, it seems probable that half or more than half the total should be assigned to small purchasers.

A comparison of the figures in the tables which show lots and values averaged among holders suggests a wide distribution of holdings and a level of values in the outlying residence wards such as to encourage the investment of small savings in homes. In the central and business section it shows no less clearly the tendency to an increase in value of property held by each holder quite independently of any significant increase in areas held. This would be still more marked but for the fact that Philadelphia has been extremely slow to alter or replace old business buildings. Many properties in the business district would be tremendously increased at once in productive value if improved or replaced to meet the present demands of business convenience.

PER CAPITA DISTRIBUTION OF LOTS AND VALUES AMONG HOLDERS IN SELECTED WARDS FOR SELECTED PERIODS, 1855 TO 1900.

Year.	Wards 1 and 39.				Wards 24 and 34.				Ward 8.			
	Lots to each holder.	Value held by each holder.		Lots to each holder.	Value held by each holder.		Lots to each holder.	Value held by each holder.		Lots to each holder.	Value held by each holder.	
		Amount.	Relative amount based on 1865.		Amount.	Relative amount based on 1865.		Amount.	Relative amount based on 1865.		Amount.	Relative amount based on 1865.
1855	1.86	\$1,545	69.4	1.22	\$2,198	128.7	1.43	\$6,560	90.0			
1865	1.41	2,225	100.0	1.50	1,708	100.0	1.42	7,292	100.0			
1875	2.32	4,015	180.1	1.92	6,221	364.4	1.48	19,530	267.8			
1885	2.20	3,597	161.7	2.08	6,709	392.8	1.53	20,505	281.2			
1895	2.33	3,931	176.7	2.10	5,827	341.2	1.57	29,175	400.1			
1900	2.24	3,945	177.3	2.37	6,328	370.5	1.53	35,856	491.7			

In the tables the general progress in all the elements considered is strikingly arrested between 1875 and 1885. This is due to two causes, one common to all parts of the country, the other local in effect. The first was the financial panic of 1873, which depressed all business interests and from which real estate was slow to recover. The second was the depression of values following the Centennial in 1876. This was

felt throughout the city, but most strongly in West Philadelphia, including Wards 24 and 34. This region was overvalued and overbuilt in anticipation of the golden harvest to be gathered from the visitors to the first great American "World's Fair." The first reaping was profitable, but the aftermath had a different character. The whole city suffered a long period of depression in real-estate business which was most acutely felt west of the Schuylkill, throughout the regions adjacent to Fairmount Park, within which the fairgrounds were located. Here values and the number of owners dropped sharply, while in Wards 1, 8, and 39 they hardly more than held their own. The choice of decennial periods has equalized the changes.

The following table shows the number of persons holding land in each ward at each period, by classified values of holdings:

NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED VALUES OF HOLDINGS, 1856 TO 1900.

WARDS 1 AND 39.

Values.	1855.	1865.	1875.	1885.	1895.	1900.
Under \$500.....	782	924	108	97	112	130
\$500 or under \$1,000.....	479	685	498	1,017	1,005	1,097
1,000 or under 1,500.....	197	226	964	838	1,210	1,359
1,500 or under 2,000.....	97	101	483	630	1,095	1,301
2,000 or under 2,500.....	90	68	407	444	736	855
2,500 or under 3,000.....	50	55	300	290	400	433
3,000 or under 3,500.....	45	31	229	228	414	443
3,500 or under 4,000.....	23	22	151	167	211	255
4,000 or under 4,500.....	19	23	137	141	208	200
4,500 or under 5,000.....	20	9	83	90	161	184
5,000 or under 5,500.....	16	18	88	76	120	141
5,500 or under 6,000.....	16	3	43	40	85	84
6,000 or under 6,500.....	11	8	59	54	89	96
6,500 or under 7,000.....	6	6	31	40	63	56
7,000 or under 7,500.....	6	5	44	37	68	71
7,500 or under 8,000.....	6	6	38	25	40	58
8,000 or under 8,500.....	9	3	34	35	55	48
8,500 or under 9,000.....	5	3	11	22	26	48
9,000 or under 9,500.....	10	1	21	17	31	42
9,500 or under 10,000.....	3	1	13	23	24	27
10,000 or under 11,000.....	10	3	31	32	55	49
11,000 or under 12,000.....	2	4	21	21	33	44
12,000 or under 13,000.....	6	1	20	23	27	37
13,000 or under 14,000.....	2		14	20	28	28
14,000 or under 15,000.....			16	11	24	21
15,000 or under 16,000.....		3	12	12	23	29
16,000 or under 17,000.....	2		14	10	11	18
17,000 or under 18,000.....	3		13	10	11	15
18,000 or under 19,000.....		1	10	14	8	9
19,000 or under 20,000.....	1		5	5	8	10
20,000 or under 25,000.....	5	8	35	20	30	35
25,000 or under 30,000.....	1	4	20	13	27	28
30,000 or under 35,000.....	2	1	11	9	15	18
35,000 or under 40,000.....	2	1	9	9	12	11
40,000 or under 45,000.....	1		8	4	6	8
45,000 or under 50,000.....			4	4	4	3
50,000 or under 100,000.....	1	1	19	15	32	34
100,000 or under 200,000.....			5	6	7	9
200,000 or under 300,000.....			2	1	3	3
300,000 or under 400,000.....			1			1
400,000 or under 500,000.....						
500,000 or over.....				1	2	2
Total persons holding land.....	1,928	2,225	4,003	4,566	6,520	7,363

LAND VALUES AND OWNERSHIP IN PHILADELPHIA. 119

NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED
VALUES OF HOLDINGS, 1855 TO 1900—Continued.

WARD 8.

Values.	1855.	1865.	1875.	1885.	1895.	1900.
Under \$500.	49	40	4	1	1	1
\$500 or under \$1,000.	174	156	35	49	39	33
1,000 or under 1,500.	174	189	98	81	67	68
1,500 or under 2,000.	84	113	72	83	36	27
2,000 or under 2,500.	71	101	102	76	46	48
2,500 or under 3,000.	82	83	81	74	32	26
3,000 or under 3,500.	73	66	82	71	50	37
3,500 or under 4,000.	87	82	44	59	24	36
4,000 or under 4,500.	68	83	39	43	58	67
4,500 or under 5,000.	49	59	48	55	40	42
5,000 or under 5,500.	64	98	53	49	71	72
5,500 or under 6,000.	66	47	39	43	34	36
6,000 or under 6,500.	46	79	58	33	43	59
6,500 or under 7,000.	37	36	19	28	16	20
7,000 or under 7,500.	49	56	39	36	39	46
7,500 or under 8,000.	27	40	24	44	31	20
8,000 or under 8,500.	35	49	52	54	48	45
8,500 or under 9,000.	17	15	31	49	22	21
9,000 or under 9,500.	43	53	39	63	25	27
9,500 or under 10,000.	18	11	15	30	30	21
10,000 or under 11,000.	51	56	74	63	80	88
11,000 or under 12,000.	40	39	50	44	39	46
12,000 or under 13,000.	27	47	71	53	65	54
13,000 or under 14,000.	25	25	35	44	44	42
14,000 or under 15,000.	15	22	45	43	38	24
15,000 or under 16,000.	24	33	47	34	57	46
16,000 or under 17,000.	15	26	47	71	46	45
17,000 or under 18,000.	10	8	40	56	48	42
18,000 or under 19,000.	12	21	59	62	58	73
19,000 or under 20,000.	8	5	27	36	25	22
20,000 or under 25,000.	26	44	139	133	189	178
25,000 or under 30,000.	15	18	104	80	107	110
30,000 or under 35,000.	6	15	64	64	80	85
35,000 or under 40,000.	5	6	45	61	55	49
40,000 or under 45,000.	6	10	58	37	57	60
45,000 or under 50,000.	6	2	36	25	42	51
50,000 or under 100,000.	13	17	133	110	145	164
100,000 or under 200,000.	2	3	35	45	63	75
200,000 or under 300,000.		1	7	7	20	26
300,000 or under 400,000.			2	6	11	13
400,000 or under 500,000.				1	5	5
500,000 or over.			1	2	5	14
Total persons holding land.	1,619	1,854	2,093	2,098	2,031	2,064

WARDS 24 AND 34.

Under \$500.	590	801	215	24	217	206
\$500 or under \$1,000.	339	411	483	263	548	568
1,000 or under 1,500.	168	241	537	372	903	1,132
1,500 or under 2,000.	122	93	357	323	891	1,052
2,000 or under 2,500.	85	77	288	338	1,139	1,404
2,500 or under 3,000.	61	42	258	231	483	563
3,000 or under 3,500.	57	43	192	185	617	723
3,500 or under 4,000.	29	35	168	176	488	503
4,000 or under 4,500.	36	25	153	158	386	490
4,500 or under 5,000.	24	19	96	114	277	345
5,000 or under 5,500.	25	15	114	106	282	364
5,500 or under 6,000.	10	13	70	90	171	190
6,000 or under 6,500.	13	12	107	126	238	255
6,500 or under 7,000.	13	10	56	74	135	148
7,000 or under 7,500.	12	4	54	55	111	135
7,500 or under 8,000.	7	3	34	52	80	116
8,000 or under 8,500.	9	8	37	56	117	137
8,500 or under 9,000.	6	3	21	40	65	100
9,000 or under 9,500.	7	4	35	44	98	118
9,500 or under 10,000.	3	2	23	24	55	68

NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED
VALUES OF HOLDINGS, 1855 TO 1900—Concluded.

WARDS 24 AND 34—Concluded.

Values.	1855.	1865.	1875.	1885.	1895.	1900.
\$10,000 or under \$11,000.....	11	5	69	59	106	132
11,000 or under 12,000.....	9	7	25	39	47	78
12,000 or under 13,000.....	4	3	41	29	68	101
13,000 or under 14,000.....	4	7	25	21	38	67
14,000 or under 15,000.....	4	1	20	20	43	73
15,000 or under 16,000.....	4	1	20	14	59	58
16,000 or under 17,000.....	5	7	19	12	35	42
17,000 or under 18,000.....	4	5	18	13	35	25
18,000 or under 19,000.....	2	4	14	18	29	26
19,000 or under 20,000.....	2	3	13	7	19	21
20,000 or under 25,000.....	7	6	67	36	84	95
25,000 or under 30,000.....	3	4	30	33	57	77
30,000 or under 35,000.....	2	—	26	19	36	52
35,000 or under 40,000.....	2	1	14	9	30	39
40,000 or under 45,000.....	1	—	13	14	15	31
45,000 or under 50,000.....	—	—	4	10	16	19
50,000 or under 100,000.....	1	1	37	30	67	79
100,000 or under 200,000.....	1	—	17	10	14	32
200,000 or under 300,000.....	—	1	1	—	1	8
300,000 or under 400,000.....	—	—	—	—	1	1
400,000 or under 500,000.....	—	—	—	—	—	1
500,000 or over.....	—	—	1	1	3	4
Total persons holding land.....	1,682	1,917	3,772	3,245	8,099	9,656

Comparing the figures for the beginning and end of the period, we find that in Wards 1 and 39 the increase in the number of owners in 1900 over the number in 1855 was 281.9 per cent. In Ward 8 there was a net gain of only 27.5 per cent, with a tendency toward a decrease in the last third of the period. In Wards 24 and 34 the percentage of increase was 474.2.

As to general grouping by valuation levels, in Ward 1 in 1855, 1,802 owners, or 93 per cent of the total number, held values below \$5,000. In 1900, 6,297, or 86 per cent, were below the \$5,000 line. Of these, 4,782, or 76 per cent of the group, fell below \$2,500. The 14 per cent of total holders whose holdings are valued above \$5,000 are distributed into groups which descend in number, with a fair degree of regularity, from 141 at \$5,000 or under \$5,500 to 1 at \$300,000 or under \$400,000 and 2 at \$500,000 or over. Nearly four-fifths of the 14 per cent lie between \$5,000 and \$15,000.

In Ward 8 in 1855, 911 owners, or 56 per cent, belonged to the group holding properties valued at less than \$5,000, while in 1900 only 385 holders, or 19 per cent, were on this level—849, or 41 per cent, standing between \$5,000 and \$20,000, and 811, or 39 per cent, between \$20,000 and \$400,000. The remaining 1 per cent of the holders are located above the \$400,000 line. It is a matter of common knowledge, however, that within very recent years the advance of actual market values of real estate in central districts has been almost

phenomenal. Assessors' valuations have lagged behind these changes, and consequently the figures of the tables must be regarded as lower than the facts justify in their presentment of both the higher values and the proportion of holders above the \$400,000 level.

In Wards 24 and 34 in 1855, 1,511 holders, or 90 per cent, and in 1900, 6,976, or 72 per cent, were below \$5,000 in respect to values of holdings. Of this 72 per cent more than half falls below \$2,500. Below \$10,000 we find, in 1900, 89 per cent of the holders. The rest are fairly evenly divided as to value levels until the \$200,000 line is reached. Above this level only 11 per cent of the total holders are found.

The first of the three tables that follow gives the number of persons holding land, assessed value of the land, and population; the second, assessed value of certain largest holdings in each ward at each period, also the per cent of the total valuations, and the third shows the rate of variation in number of holders, assessed value, and population by relating them to the figures for 1865 as a base:

NUMBER OF PERSONS HOLDING LAND, ASSESSED VALUE OF THE LAND, AND POPULATION IN EACH WARD AT EACH PERIOD, 1855 TO 1900.

Wards.	Years.	Holders.		Assessed value of taxable property.		Population.	
		Number.	Relative number based on 1865.	Amount.	Relative amount based on 1865.	Number.	Relative number based on 1865.
Wards 1 and 39	1855	1,928	86.7	\$2,979,574	111.8	(a)	(a)
	1865	2,225	100.0	2,664,862	100.0	b 28,238	100.0
	1875	4,002	179.9	16,071,619	603.1	b 33,350	118.1
	1885	4,566	205.2	16,415,425	616.0	b 48,180	170.6
	1895	6,520	293.0	25,630,212	961.8	b 64,967	230.1
	1900	7,363	330.9	29,049,583	1,090.1	78,296	277.3
Ward 8	1855	1,619	87.3	10,621,157	78.6	b 22,157	89.1
	1865	1,854	100.0	13,621,130	100.0	b 24,877	100.0
	1875	2,093	112.9	40,878,250	302.3	b 20,872	83.9
	1885	2,098	113.2	48,019,850	318.2	b 18,214	73.2
	1895	2,031	109.5	59,254,800	438.2	b 16,353	65.7
	1900	2,064	111.3	73,006,150	539.9	15,757	63.3
Wards 24 and 34	1855	1,682	87.7	3,697,977	112.9	(a)	(a)
	1865	1,917	100.0	3,275,320	100.0	b 24,328	100.0
	1875	3,772	196.8	23,477,418	716.8	b 33,892	139.3
	1885	3,245	169.3	21,772,730	664.8	b 55,254	227.1
	1895	8,099	422.5	47,196,989	1,441.0	b 80,141	329.4
	1900	9,658	503.8	61,124,285	1,866.2	96,906	398.3

a Not reported.

b Estimated.

NUMBER OF PERSONS HOLDING LAND, ASSESSED VALUE OF THE LAND, AND ASSESSED VALUE OF CERTAIN LARGEST HOLDINGS IN EACH WARD AT EACH PERIOD, 1865 TO 1900.

Wards.	Years.	Number of holders.	Assessed value of taxable property.	Taxable property held by 10 largest holders.		Taxable property held by the 1 per cent of holders having largest holdings.	
				Assessed value.	Per cent of total property.	Assessed value.	Per cent of total property.
Wards 1 and 39	1855...	1,928	\$2,979,574	\$335,824	11.27	\$497,600	16.70
	1865...	2,225	2,664,862	295,762	11.10	496,537	18.63
	1875...	4,002	16,071,619	1,694,500	10.54	3,334,424	20.75
	1885...	4,566	16,415,425	2,071,250	12.62	3,776,184	23.00
	1895...	6,520	25,630,212	3,030,850	11.83	6,226,825	24.29
	1900...	7,363	29,049,563	3,534,900	12.17	7,408,595	25.50
Ward 8	1855...	1,619	10,621,157	859,250	8.09	1,179,065	11.10
	1865...	1,854	13,521,130	1,172,300	8.67	1,695,620	12.54
	1875...	2,098	40,878,250	2,935,900	7.18	4,828,900	11.81
	1885...	2,098	43,019,850	4,061,700	9.44	6,396,500	14.87
	1895...	2,031	59,254,800	5,779,500	9.75	9,191,500	15.51
	1900...	2,064	73,006,150	10,440,000	14.30	15,691,160	21.49
Wards 24 and 34	1855...	1,682	3,697,977	512,832	13.87	662,954	17.98
	1865...	1,917	3,275,320	470,775	14.37	650,296	19.85
	1875...	3,772	23,477,418	3,338,200	14.22	5,770,940	24.58
	1885...	3,245	21,772,730	3,398,100	15.61	5,127,685	23.55
	1895...	8,099	47,196,989	5,590,425	11.84	11,175,487	23.68
	1900...	9,658	61,124,285	6,226,060	10.19	15,168,940	24.82

RATES OF VARIATION IN VARIOUS ELEMENTS COMPARED, 1865 TAKEN AS BASE.

WARDS 1 AND 39.

Year.	Population.	Number of holders.	Total valuation.	Per cent of property held by 10 largest holders.	Per cent of property held by the 1 per cent of holders having largest holdings.
1855.....		86.7	111.8	101.53	89.64
1865.....	100.0	100.0	100.0	100.00	100.00
1875.....	118.1	179.9	603.1	94.95	113.37
1885.....	170.6	205.2	616.0	113.69	123.45
1895.....	230.1	293.0	961.8	106.07	130.38
1900.....	277.3	330.9	1,090.1	109.63	136.87

WARD 8.

1855.....	89.1	87.3	78.6	93.31	88.51
1865.....	100.0	100.0	100.0	100.00	100.00
1875.....	83.9	112.9	302.3	82.61	94.17
1885.....	73.2	113.2	318.2	106.98	118.58
1895.....	65.7	109.5	438.2	112.45	123.68
1900.....	63.3	111.3	539.9	164.93	171.37

WARDS 24 AND 34.

1855.....		87.7	112.9	96.52	90.32
1865.....	100.0	100.0	100.0	100.00	100.00
1875.....	189.3	196.8	716.8	98.95	123.82
1885.....	227.1	169.3	664.8	108.62	118.63
1895.....	329.4	422.5	1,441.0	82.39	119.29
1900.....	394.3	503.8	1,866.2	70.91	126.08

The contrast in the residence and business development of real estate as shown in Wards 1, 39, 24, and 34 and in Ward 8, respectively, is

apparent in the ranking of the elements as to rate of increase. Beginning with the one showing highest rate of increase the elements rank as follows:

Wards 1, 39, 24, and 34:

1. Valuation.
2. Number of holders.
3. Population.
4. The 1 per cent of holders having largest holdings.
5. Ten largest holders.

Ward 8:

1. Valuation.
2. The 1 per cent of holders having largest holdings.
3. Ten largest holders.
4. Number of holders.
5. Population.

The actual number of persons included in the 1 per cent of holders having largest holdings and the valuation held by them have been set in immediate relation with the figures for the 10 largest holders, as follows:

WARDS 1 AND 39.

In 1855 10 owners held 11.27 per cent; 19 owners, 16.70 per cent of total valuation.
 In 1865 10 owners held 11.19 per cent; 22 owners, 18.63 per cent of total valuation.
 In 1875 10 owners held 10.54 per cent; 40 owners, 20.75 per cent of total valuation.
 In 1885 10 owners held 12.62 per cent; 46 owners, 23.00 per cent of total valuation.
 In 1895 10 owners held 11.83 per cent; 65 owners, 24.29 per cent of total valuation.
 In 1900 10 owners held 12.17 per cent; 74 owners, 25.50 per cent of total valuation.

WARD 8.

In 1855 10 owners held 8.09 per cent; 16 owners, 11.10 per cent of total valuation.
 In 1865 10 owners held 8.67 per cent; 19 owners, 12.54 per cent of total valuation.
 In 1875 10 owners held 7.18 per cent; 21 owners, 11.81 per cent of total valuation.
 In 1885 10 owners held 9.44 per cent; 21 owners, 14.87 per cent of total valuation.
 In 1895 10 owners held 9.75 per cent; 20 owners, 15.51 per cent of total valuation.
 In 1900 10 owners held 14.30 per cent; 21 owners, 21.49 per cent of total valuation.

WARDS 24 AND 34.

In 1855 10 owners held 13.87 per cent; 17 owners, 17.93 per cent of total valuation.
 In 1865 10 owners held 14.37 per cent; 19 owners, 19.85 per cent of total valuation.
 In 1875 10 owners held 14.22 per cent; 38 owners, 24.58 per cent of total valuation.
 In 1885 10 owners held 15.61 per cent; 32 owners, 23.55 per cent of total valuation.
 In 1895 10 owners held 11.84 per cent; 81 owners, 23.68 per cent of total valuation.
 In 1900 10 owners held 10.19 per cent; 97 owners, 24.82 per cent of total valuation.

In the 1 per cent group there has been a steady gain, the rate of which accelerates in recent years, resulting in a strikingly similar condition in the several wards at the end of the period, when throughout the selected wards practically one-quarter of the valuation is held by one one-hundredth of the owners. The uniformity of progress to this point is disturbed in Wards 24 and 34 by the influence of the Centennial. The 10 largest holders have lost in relative importance in

Wards 24 and 34, a little more than held their own in Wards 1 and 8 while in Ward 8 they have made heavy gains, the increase being more marked in very recent years. Both the total number of holders and the valuation show a rate of increase far higher than that of the population. In Ward 8, however, the movement of the figures of the number of holders' column seems in the last fifteen years to have changed its direction. There is a slight tendency to concentration of ownership in Ward 8 discernible in the residence wards.

The following two tables show, respectively, the number of persons holding land in each ward at each period by classified areas of holdings, and the number of lots in each ward at each period by classified areas:

NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED AREAS OF HOLDINGS, 1855 TO 1900.

WARDS 1 AND 39.

Areas (square feet).	1855.	1865.	1875.	1885.	1895.	1900.
Under 500	3	20	33	33	37	3, 1,
500 or under 1,000	80	865	1,628	1,817	2,719	
1,000 or under 1,500	84	848	829	971	1,380	
1,500 or under 2,000	82	283	343	378	610	
2,000 or under 2,500	47	106	236	273	356	
2,500 or under 3,000	14	61	122	149	236	
3,000 or under 3,500	23	62	106	142	189	
3,500 or under 4,000	20	47	86	105	142	
4,000 or under 4,500	12	27	55	76	87	
4,500 or under 5,000	9	20	44	52	72	
5,000 or under 5,500	11	16	31	58	73	
5,500 or under 6,000	7	23	34	35	50	
6,000 or under 6,500	8	12	37	88	60	
6,500 or under 7,000	4	6	16	20	34	
7,000 or under 7,500	3	16	20	23	37	
7,500 or under 8,000	9	9	16	18	22	
8,000 or under 8,500	3	10	12	14	20	
8,500 or under 9,000	5	5	12	16	14	
9,000 or under 9,500	1	6	11	18	21	
9,500 or under 10,000	5	6	11	15	11	
10,000 or under 11,000	3	14	24	21	27	
11,000 or under 12,000	2	6	15	13	20	
12,000 or under 13,000	3	7	23	12	12	
13,000 or under 14,000	6	3	12	12	14	
14,000 or under 15,000	2	6	8	10	5	
15,000 or under 16,000	5	2	4	11	7	
16,000 or under 17,000	3	7	4	6	13	
17,000 or under 18,000	1	1	6	3	6	
18,000 or under 19,000	4	5	7	9	7	
19,000 or under 20,000	2	5	7	3	4	
20,000 or under 25,000	7	15	25	17	18	
25,000 or under 30,000	4	7	8	7	9	
30,000 or under 35,000	4	6	7	14	12	
35,000 or under 40,000	8	6	6	3	6	
40,000 or under 45,000	7	6	-8	8	9	
45,000 or under 50,000	2	5	2	1	5	
50,000 or under 100,000	10	18	20	18	24	
100,000 or under 200,000	28	21	14	17	15	
200,000 or under 300,000	21	12	13	13	7	
300,000 or under 400,000	16	7	9	11	9	
400,000 or under 500,000	9	4	9	11	9	
500,000 or over	35	44	45	35	33	
Total persons holding land with area reported	616	2,154	3,960	4,505	6,441	7.
Persons holding land with area not reported	1,312	71	42	61	79	
Total persons holding land	1,928	2,225	4,002	4,566	6,520	7.

NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED AREAS OF HOLDINGS, 1855 TO 1900—Continued.

WARD 8.

Areas (square feet).	1855.	1865.	1875.	1885.	1895.	1900.
Under 500	8	45	70	60	47	49
500 or under 1,000	36	205	275	256	234	238
1,000 or under 1,500	73	301	361	376	349	360
1,500 or under 2,000	40	277	302	325	321	331
2,000 or under 2,500	64	218	260	277	293	299
2,500 or under 3,000	29	144	142	154	161	184
3,000 or under 3,500	20	91	136	121	114	109
3,500 or under 4,000	23	81	76	80	80	67
4,000 or under 4,500	21	51	70	64	71	65
4,500 or under 5,000	24	67	54	57	49	58
5,000 or under 5,500	15	46	56	54	44	50
5,500 or under 6,000	7	44	53	45	43	38
6,000 or under 6,500	6	34	26	34	37	29
6,500 or under 7,000	4	13	22	16	25	20
7,000 or under 7,500	8	20	13	14	12	15
7,500 or under 8,000	11	20	21	15	12	17
8,000 or under 8,500	9	20	12	14	13	11
8,500 or under 9,000	5	7	7	5	6	8
9,000 or under 9,500	1	9	10	7	7	6
9,500 or under 10,000	7	7	8	6	4	5
10,000 or under 11,000	9	21	23	18	23	21
11,000 or under 12,000	6	13	10	11	10	8
12,000 or under 13,000	1	5	8	7	10	12
13,000 or under 14,000	2	10	6	9	6	5
14,000 or under 15,000	2	8	8	5	4	4
15,000 or under 16,000		4	6	2	4	5
16,000 or under 17,000		6	5	6	6	1
17,000 or under 18,000		8	2	4	3	5
18,000 or under 19,000	2	4	6	1	4	3
19,000 or under 20,000	3	5		1	1	
20,000 or under 25,000	6	8	11	8	7	8
25,000 or under 30,000	6	6	5	6	8	8
30,000 or under 35,000	1	2	2	5	4	4
35,000 or under 40,000		4	1	3	4	4
40,000 or under 45,000	2	4	2			2
45,000 or under 50,000	2	1	1	2	2	
50,000 or under 100,000		3		5	5	6
100,000 or under 200,000			1			
200,000 or under 300,000						
300,000 or under 400,000						
400,000 or under 500,000						
500,000 or over						
Total persons holding land with areas reported.	453	1,807	2,072	2,073	2,023	2,049
Persons holding land with areas not reported.	1,166	47	21	25	8	15
Total persons holding land	1,619	1,854	2,093	2,098	2,031	2,064

WARDS 24 AND 34.

Under 500			12	14	30	21
500 or under 1,000	1	22	269	379	879	1,044
1,000 or under 1,500	12	53	320	575	1,014	2,279
1,500 or under 2,000	15	91	359	462	1,210	1,589
2,000 or under 2,500	23	105	324	303	617	793
2,500 or under 3,000	20	74	274	321	559	640
3,000 or under 3,500	9	70	191	155	369	402
3,500 or under 4,000	19	53	143	100	257	294
4,000 or under 4,500	15	49	138	99	202	226
4,500 or under 5,000	4	86	135	83	204	225
5,000 or under 5,500	29	65	129	80	166	194
5,500 or under 6,000	12	32	70	51	148	171
6,000 or under 6,500	16	36	88	53	105	137
6,500 or under 7,000	6	16	63	44	87	103
7,000 or under 7,500	11	29	38	31	81	95

**NUMBER OF PERSONS HOLDING LAND IN EACH WARD AT EACH PERIOD, BY CLASSIFIED
AREAS OF HOLDINGS, 1855 TO 1900—Concluded.**

WARDS 24 AND 34—Concluded.

Areas (square feet).		1855.	1865.	1875.	1885.	1895.	1900.
7,500 or under 8,000		7	29	70	88	75	90
8,000 or under 8,500		6	41	57	85	57	64
8,500 or under 9,000		9	14	58	81	49	57
9,000 or under 9,500		11	37	70	85	79	73
9,500 or under 10,000		4	11	47	17	40	51
10,000 or under 11,000		20	69	71	80	73	84
11,000 or under 12,000		14	25	72	11	69	73
12,000 or under 13,000		7	26	45	23	60	72
13,000 or under 14,000		3	16	46	27	47	35
14,000 or under 15,000		5	14	29	22	32	50
15,000 or under 16,000		13	21	26	19	80	55
16,000 or under 17,000		7	18	28	21	22	29
17,000 or under 18,000		9	10	17	13	22	28
18,000 or under 19,000		2	20	29	14	27	38
19,000 or under 20,000		1	7	18	8	26	27
20,000 or under 25,000		24	54	88	30	100	125
25,000 or under 30,000		18	29	47	27	54	63
30,000 or under 35,000		19	32	44	15	36	44
35,000 or under 40,000		12	9	16	6	29	38
40,000 or under 45,000		14	17	22	12	27	28
45,000 or under 50,000		6	9	13	6	22	23
50,000 or under 100,000		51	36	74	31	87	81
100,000 or under 200,000		31	44	56	12	43	53
200,000 or under 300,000		20	23	19	4	25	20
300,000 or under 400,000		27	17	13	2	17	10
400,000 or under 500,000		15	6	8	-----	9	11
500,000 or over		179	72	72	1	57	42
Total persons holding land with areas reported		725	1,487	3,708	3,230	8,042	9,507
Persons holding land with areas not reported		957	430	64	15	57	151
Total persons holding land		1,682	1,917	3,772	3,245	8,099	9,658

NUMBER OF LOTS IN EACH WARD AT EACH PERIOD, BY CLASSIFIED AREAS, 1855 TO 1900.

WARDS 1 AND 39.

Areas (square feet).		1855.	1865.	1875.	1885.	1895.	1900.
Under 500		5	41	191	168	180	178
500 or under 1,000		186	1,569	5,723	6,468	10,873	11,907
1,000 or under 1,500		351	517	2,281	2,212	2,964	3,244
1,500 or under 2,000		245	334	438	404	419	440
2,000 or under 2,500		68	89	119	119	111	125
2,500 or under 3,000		28	41	33	42	57	60
3,000 or under 3,500		36	61	66	73	72	71
3,500 or under 4,000		17	41	46	59	48	43
4,000 or under 4,500		18	35	25	38	34	32
4,500 or under 5,000		16	10	20	23	16	16
5,000 or under 5,500		10	16	12	20	17	16
5,500 or under 6,000		9	15	15	19	15	15
6,000 or under 6,500		13	19	19	28	27	23
6,500 or under 7,000		6	6	10	12	11	7
7,000 or under 7,500		6	15	16	11	11	10
7,500 or under 8,000		5	11	11	12	3	2
8,000 or under 8,500		3	13	11	8	14	12
8,500 or under 9,000		7	5	5	3	5	2
9,000 or under 9,500		5	5	7	8	7	4
9,500 or under 10,000		6	5	1	5	2	2
10,000 or under 11,000		5	19	11	13	8	10
11,000 or under 12,000		5	7	5	6	7	6
12,000 or under 13,000		6	8	6	11	11	10
13,000 or under 14,000		7	5	5	8	7	5
14,000 or under 15,000		5	7	1	4	2	2
15,000 or under 16,000		6	4	3	10	5	4
16,000 or under 17,000		5	5	-----	5	6	5
17,000 or under 18,000		3	1	4	1	5	3
18,000 or under 19,000		4	7	8	9	2	4
19,000 or under 20,000		1	2	1	1	2	2

LAND VALUES AND OWNERSHIP IN PHILADELPHIA. 127

NUMBER OF LOTS IN EACH WARD AT EACH PERIOD, BY CLASSIFIED AREAS, 1855 TO 1900—Continued.

WARDS 1 AND 39—Concluded.

Areas (square feet).	1855.	1865.	1875.	1885.	1895.	1900.
20,000 or under 25,000	8	15	17	19	12	10
25,000 or under 30,000	10	6	6	8	8	4
30,000 or under 35,000	7	10	7	11	9	8
35,000 or under 40,000	7	7	24	3	4	3
40,000 or under 45,000	23	8	7	7	7	6
45,000 or under 50,000	5	3	.....	1	10	3
50,000 or under 100,000	27	20	19	22	23	22
100,000 or under 200,000	56	26	19	27	16	13
200,000 or under 300,000	28	13	17	19	14	13
300,000 or under 400,000	27	12	15	16	15	13
400,000 or under 500,000	16	7	9	12	9	11
500,000 or over	41	43	45	43	42	38
Total number of lots with areas reported	1,342	3,073	9,277	9,990	15,110	16,411
Number of lots with areas not reported	2,258	74	47	72	90	95
Total number of lots	3,596	3,147	9,324	10,062	15,200	16,506

WARD 8.

Under 500	13	79	193	208	216	200
500 or under 1,000	71	464	701	701	690	666
1,000 or under 1,500	133	524	683	682	686	688
1,500 or under 2,000	70	425	428	489	489	503
2,000 or under 2,500	105	302	357	371	381	386
2,500 or under 3,000	50	192	173	200	195	191
3,000 or under 3,500	48	112	135	142	136	132
3,500 or under 4,000	38	95	68	70	71	68
4,000 or under 4,500	39	61	65	65	62	58
4,500 or under 5,000	33	78	49	54	55	55
5,000 or under 5,500	19	38	41	45	32	33
5,500 or under 6,000	8	44	51	46	46	41
6,000 or under 6,500	12	26	24	24	24	22
6,500 or under 7,000	5	15	19	17	19	17
7,000 or under 7,500	9	18	9	9	14	14
7,500 or under 8,000	14	14	16	14	10	12
8,000 or under 8,500	9	18	9	11	5	6
8,500 or under 9,000	2	6	3	4	4	6
9,000 or under 9,500	2	6	5	5	4	4
9,500 or under 10,000	4	3	2	2	2	2
10,000 or under 11,000	14	15	13	8	11	10
11,000 or under 12,000	9	6	5	6	5	5
12,000 or under 13,000	2	6	5	3	5	3
13,000 or under 14,000	1	6	3	4	3	2
14,000 or under 15,000	5	7	6	5	4	5
15,000 or under 16,000	2	4	3	2	2	2
16,000 or under 17,000	1	1	.....	1	4	3
17,000 or under 18,000	1	2	.....	1	2	2
18,000 or under 19,000	2	2	2	1	1	1
19,000 or under 20,000	2	2	1	.....	.....	.....
20,000 or under 25,000	6	5	7	2	3	3
25,000 or under 30,000	7	2	2	2	3	5
30,000 or under 35,000 .....	.....	1	1	3	1	1
35,000 or under 40,000	2	1	1	2	2	3
40,000 or under 45,000	1	2	1	.....	.....	.....
45,000 or under 50,000	1	1	1	1	1	.....
50,000 or under 100,000	2	4	2	1	1	2
100,000 or under 200,000 .....	.....	.....	.....	.....	.....	.....
200,000 or under 300,000 .....	.....	.....	.....	.....	.....	.....
300,000 or under 400,000 .....	.....	.....	.....	.....	.....	.....
400,000 or under 500,000 .....	.....	.....	.....	.....	.....	.....
500,000 or over .....	.....	.....	.....	.....	.....	.....
Total number of lots with areas reported	742	2,587	3,084	3,196	3,189	3,151
Number of lots with areas not reported	1,583	50	33	34	15	18
Total number of lots	2,325	2,637	3,117	3,230	3,204	3,169

NUMBER OF LOTS IN EACH WARD AT EACH PERIOD, BY CLASSIFIED AREAS, 1855 TO 1900—Concluded.

WARDS 24 AND 34.

Areas (square feet).	1855.	1865.	1875.	1885.	1895.	1900.
Under 500		1	84	63	185	115
500 or under 1,000	3	31	1,175	1,771	4,225	5,842
1,000 or under 1,500	18	85	1,041	1,880	5,111	7,315
1,500 or under 2,000	24	139	935	1,047	2,740	4,030
2,000 or under 2,500	36	177	648	504	1,087	1,324
2,500 or under 3,000	29	111	504	453	849	1,015
3,000 or under 3,500	16	107	349	212	466	556
3,500 or under 4,000	23	63	237	110	255	285
4,000 or under 4,500	23	115	185	100	194	204
4,500 or under 5,000	8	228	183	78	197	216
5,000 or under 5,500	41	120	176	71	152	176
5,500 or under 6,000	19	59	100	45	113	131
6,000 or under 6,500	22	59	125	36	110	137
6,500 or under 7,000	8	45	75	40	88	110
7,000 or under 7,500	19	52	55	25	42	41
7,500 or under 8,000	16	46	87	36	74	90
8,000 or under 8,500	10	57	70	24	39	56
8,500 or under 9,000	15	19	43	11	36	37
9,000 or under 9,500	17	60	73	25	58	60
9,500 or under 10,000	4	28	40	18	40	40
10,000 or under 11,000	41	95	73	21	60	86
11,000 or under 12,000	22	38	40	14	73	73
12,000 or under 13,000	10	38	57	18	40	55
13,000 or under 14,000	2	36	42	13	41	37
14,000 or under 15,000	10	14	25	13	31	38
15,000 or under 16,000	22	29	35	9	35	46
16,000 or under 17,000	8	22	38	16	21	40
17,000 or under 18,000	12	7	15	8	16	23
18,000 or under 19,000	6	32	34	10	18	20
19,000 or under 20,000	6	9	28	8	30	23
20,000 or under 25,000	39	62	91	28	108	102
25,000 or under 30,000	22	32	61	35	51	46
30,000 or under 35,000	41	44	53	13	49	56
35,000 or under 40,000	14	10	16	8	27	32
40,000 or under 45,000	20	20	30	8	31	31
45,000 or under 50,000	6	10	10	3	16	19
50,000 or under 100,000	63	60	119	28	90	84
100,000 or under 200,000	55	63	69	6	74	59
200,000 or under 300,000	26	28	32	3	24	31
300,000 or under 400,000	31	19	17	1	22	22
400,000 or under 500,000	20	16	10	2	12	11
500,000 or over	223	91	70	.....	60	47
Total number of lots with areas reported	1,050	2,375	7,190	6,764	16,935	22,765
Number of lots with areas not reported	1,005	503	82	20	74	179
Total number of lots	2,055	2,878	7,272	6,784	17,009	22,944

These tables show strikingly the progress of subdivision of land. The number of small lots has increased—in some cases a hundred-fold or more. At the same time, the increase in the number of holders, especially of lots of small area, shows a wide distribution of these small lots among owners of modest means.

In the residence wards the progress of subdivision has been practically in parallel lines, though in West Philadelphia the quantities are in larger terms, as befits the better-to-do population. In Wards 1 and 39, in 1900, 88 per cent of holders held areas under 4,000 square feet. Heavy emphasis is laid on the very small lot, about 15 by 50 to 70 feet. The typical Philadelphia lot, above the level of the workingman's home, is one from 20 to 25 feet frontage and from 75 to 150 feet

depth. This standard of size leads in Wards 8, 24, and 34. In Wards 1, 39, 24, and 34 there are still large areas undivided. In Wards 1 and 39, in 1855, 81 holders held plots of 5 acres (") or over. In 1900 this was true of 54 holders, but the number of those holding the largest areas had lessened but slightly, the holders of plots of 12 acres or over being but 35 in 1855 and 30 in 1900.

The areas not reported and discrepancies which are apparent in comparisons of the figures of the two tables show that the assessors are by no means overaccurate in their work.

In the development of a city from farming land we have seen, in the case of Philadelphia, certain phenomena which we may regard as typical and anticipate in any investigation of urban growth.

First. In the general rise of values the per cent of increase in the average value of property held by each owner is less than the per cent of increase in the total value of property. It is also noticed that the higher values of the series move upward more slowly than the lower. In Ward 8 the starting point of value chosen for 1855 was "under \$500." In 1855 Ward 8 had 49 holders of values under \$500. In twenty years 45 of these holders had disappeared. In the following ten years 3 more had vanished. For the last fifteen years of the total period observed, 1 such holder has persisted. The number of tiny lots has increased fifteen fold, but their owners must now be classed as among the "over \$500" holders. Again, in Ward 8, at the beginning of our period, the greatest concentration of holders was found at values ranging from \$500 to \$1,500. At the end of the period the concentration had shifted to values of from \$20,000 to \$25,000.

Second. In the differentiation in values in business and residence real estate the transition from farm to residence use brings tremendous change in values, but the values placed on land as the standing ground for modern commercial activities are written in figures so large that for the ordinary mind they have no intelligible concrete quality. This phenomenon is far more marked within the last two decades than previously, and as an economic fact belongs with the concentration of capital which has meant the development of huge corporate business organizations. To gain full knowledge on this point a close study of limited areas must be undertaken and the assessors' valuations must be supplemented by records of transfer, statements of lease value, and so on. It would not be easy to reach all the facts necessary for completing such a study.

Third. In the relation of value to population the distinction of use is significant. In residence use the population and value move upward together, but the rate of increase in value far outstrips the rate of increase in population. In business use, however, population and value take different directions, the latter advancing by leaps and

* The tables give all areas in square feet. The corresponding value in acres is given approximately only, as a more familiar form for large areas.

bounds, while the former decreases. It is true that a consideration of a large area, as a whole city, equalizing the distribution of the population, tends to lessen the apparent force of this distinction of use as affecting value, and to magnify the effect of population as the most important factor in the increase of value. In the large this is a correct position, but in the more detailed and local sense business use segregates an area of its own within which a study of values presents facts which do not emerge in residence sections, even under conditions of overcrowding as acute as the world has yet known.

Some other points may be observed in which it would seem probable that Philadelphia's development might not be repeated in other cities. In the residence wards, for example, the rate of increase in the number of owners is far higher than the rate of increase of the population, but not so high as the rate of increase in the subdivision of area. It is probable that relatively to other cities a large proportion of the citizens are landholders. Naturally no large proportion of holders can be classed as "land rich," since, in the residence wards, where the number of owners is on the rapid increase, 72 per cent (Wards 24 and 34) and 86 per cent (Wards 1 and 39) are below the \$5,000 value level.

The most interesting question involved at the present time in an investigation such as this is the question as to tendencies toward concentration or the contrary, of the land wealth of the community. In a sense it seems a disappointment to be unable to reach a final dictum on this point. Both tendencies are evident. In the residence wards the tendency to concentration is hardly distinguishable among the ten largest holders. Indeed, within this arbitrarily limited area the contrary tendency prevails in well-to-do West Philadelphia. Making the top section include 1 per cent of owners, however, we arrive at remarkably similar results, as previously noted, 1 per cent of owners holding approximately one-quarter of the land values in all the wards examined. In business values the movement toward concentration is evident within the narrower section, 10 owners now holding 14.30 per cent of the values of Ward 8, as against 8.09 per cent in 1855 and 9.44 per cent in 1885. This is a large gain, especially when it is remembered that just at this point allowance must be made, at least more than in other parts of the city, for undervaluation. More than one careful observer believes that the last fifteen years have brought an unusual amount of investment in real estate in the business section of this city by men of great wealth, who have thus evidenced their belief in the stability and security of real estate as a permanent investment. This would account reasonably for the heavy recent percentages of increase just mentioned, which otherwise seem rather out of proportion to the general conditions. On the other hand, dropping from the levels of great wealth to those of moderate and small means, the tendency to a widening dis-

tribution seems marked. Investment of large sums of money in residence property is not so attractive as in the case of business properties. The liking for the ownership of his own home is characteristic of the Philadelphian, and the number of owners, throughout our whole period, has increased at a far more rapid rate than has the population. It may be that there lies, somewhere between the mass of small holders and the 1 per cent of holders having largest holdings, a line of division of tendency. Above that line wealth seeks to secure itself an assured existence and finds the form for this condition in large holdings of land; below that line a desire for a like security and stability of domestic life leads to a general investment of small amounts in real estate, thus insuring a constantly widening distribution and ownership within this area of limited incomes. It may be surmised that, at least in the city under observation, some such line of demarcation divides the higher table lands of opulence from the lower valleys of moderate comfort and of struggling thrift. If so, the data of this study are not adequate to determine its location and nature.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

[It is the purpose of this Bureau to publish from time to time important agreements made between large bodies of employers and employees with regard to wages, hours of labor, etc. The Bureau would be pleased to receive copies of such agreements whenever made.]

ARBITRATION AGREEMENT BETWEEN AMERICAN NEWSPAPER PUBLISHERS' ASSOCIATION AND INTERNATIONAL TYPOGRAPHICAL UNION.

SECTION 1. On and after May 1, 1902, and until May 1, 1907, any publisher who is a member of the American Newspaper Publishers' Association, employing union labor in any department or departments of his office under a contract or contracts, written or verbal, with a local union or unions affiliated with the International Typographical Union where such contracts have been approved by the president of the latter organization, as well as under all contracts in force on May 1, 1901, shall have the following guarantees:

a. He shall be protected under such contract or contracts by the International Typographical Union against walk-outs, strikes, boycotts, or any other form of concerted interference with the peaceful operation of the department or departments of labor so contracted for, by any union or unions with which he has contractual relations; provided such publisher shall enter into an agreement with the International Typographical Union to arbitrate all differences that may arise under said verbal or written contracts between said publisher and the local union affecting union employees in said department or departments, if such said differences can not be settled by conciliation.

b. All disputes arising over scale provisions relating to wages and hours in renewing or extending contracts shall likewise be subject to arbitration under the provisions of this agreement, if such disputes can not be adjusted through conciliation.

It is expressly understood that contracts hereafter entered into by publishers with allied trades councils shall not be recognized as coming under the terms of this agreement.

SEC. 2. The International Typographical Union further agrees to arbitrate any and all differences that may arise in the mechanical departments of any newspaper, member of the American Newspaper Publishers' Association, which shall enter into an agreement to that effect; provided all departments of said newspaper under the jurisdiction of the International Typographical Union are strictly union departments and are so recognized.

SEC. 3. The question whether a department shall be union or non-union shall not be classed as a "difference" to be arbitrated.

SEC. 4. If conciliation between the publisher and a local union fails, then provision must be made for local arbitration. If local arbitration

or arbitrators can not be agreed upon, all differences shall be referred, upon application of either party, to the National Board of Arbitration. In case a local board of arbitration is formed, and a decision rendered which is unsatisfactory to either side, then review by the National Board of Arbitration may be asked for by the dissatisfied party, provided notice to the other party to that effect is given within fifteen days thereafter. It shall be optional with the board to grant or deny such review as the facts in the case may warrant.

SEC. 5. In case a review is granted, as provided in section 4, the National Board of Arbitration shall not take evidence except by a majority vote of the board, but both parties to the controversy may be required to submit records and briefs, and to make oral or written arguments (at the option of the board), in support of their several contentions. They may submit an agreed statement of facts, or a transcript of testimony properly certified to, before a notary public by the stenographer taking the original evidence or depositions.

SEC. 6. Pending final decision, work shall be continued in the office of the publisher, party to the case, and the award of the National Board of Arbitration shall, in all cases, include a determination of the issues involved, covering the period between the raising of the issues and their final settlement; and any change or changes in the wage scale of employees may, at the discretion of the board, be made effective from the date the issues were first made.

SEC. 7. Union departments shall be understood to mean such as are made up wholly of union employees, in which union rules prevail, and in which the union has been formally recognized by the employer.

SEC. 8. This agreement shall apply to individual members of the American Newspaper Publishers' Association or local associations of publishers accepting it and the rules drafted hereunder, at least sixty (60) days before a dispute shall arise.

SEC. 9. The National Board of Arbitration shall consist of the president of the International Typographical Union and the commissioner of the American Newspaper Publishers' Association, or their proxies, and in the event of a failure to reach an agreement, these two shall select a third member in each dispute, the member so selected to act as chairman of the board. The finding of the majority of the board shall be final, and shall be accepted as such by the parties to the dispute under consideration.

SEC. 10. In the event of either party to the dispute refusing to accept and comply with the decision of the National Board of Arbitration, all aid and support to the firm or employer, or local union refusing acceptance and compliance, shall be withdrawn by both parties to this agreement. The acts of such recalcitrant employer or union shall be publicly disavowed, and the aggrieved party to this agreement shall be furnished by the other with an official document to that end.

SEC. 11. The said National Board of Arbitration must act, when its services are desired by either party to a dispute as above, and shall proceed with all possible dispatch in rendering such services.

SEC. 12. All expenses attendant upon the settlement of any dispute, except the personal expenses of the commissioner of the American Newspaper Publishers' Association and the president of the International Typographical Union, shall be borne equally by the parties to the dispute.

SEC. 13. The conditions obtaining before the initiation of the dispute shall remain in effect pending the finding of the local or of the National Board of Arbitration.

SEC. 14. The following rules shall govern the National Board of Arbitration in adjusting differences between parties to this agreement:

1. It may demand duplicate typewritten statements of grievances.
2. It may examine all parties involved in any differences referred to it for adjudication.
3. It may employ such stenographers, etc., as may be necessary to facilitate business.
4. It may require affidavit on all disputed points.
5. It shall have free access to all books and records bearing on points at issue.
6. Equal opportunities shall be allowed for presentation of evidence and argument.
7. Investigations shall be conducted in the presence of the representatives of both parties.
8. The deliberations shall be conducted in executive session, and the findings, whether unanimous or not, shall be signed by all members of the board in each instance.
9. In the event of either party to the dispute refusing to appear or present its case after due notice, it may be adjudicated in default, and findings rendered against such party.

10. All evidence communicated to the board in confidence shall be preserved inviolate, and no record of such evidence shall be kept.

SEC. 15. The form of contract to be entered into by the publisher and the International Typographical Union shall be as follows:

CONTRACT.

It is agreed between ——— publisher and proprietor of the ———, and ———, duly authorized to act in its behalf, party of the first part, and the International Typographical Union, by its president, duly authorized to act in its behalf and also in behalf of ——— Union of ———, as follows:

That any and all disputes that may arise—

1. Under any contract, verbal or written, in force May 1, 1901.
2. Under any contract, verbal or written, approved by the president of the International Typographical Union.
3. All disputes arising over scale provisions relating to wages and hours in renewing and extending contracts between ——— publisher(s) or proprietor(s) and the ——— union(s), or any member thereof, now operating in the ——— department(s) of the ——— shall first be settled by conciliation between the publisher and the authorities of the local union, if possible. If not, the matter shall be referred to arbitration, each party to the controversy to select one arbitrator, and the two thus chosen to select a third, the decision of a majority of such board of arbitration to be final and binding upon both parties, except as hereinafter provided for.

If local arbitration or arbitrators can not be agreed upon, all differences shall be referred, upon application of either party, to the National Board of Arbitration, consisting of the president of the International Typographical Union and the commissioner of the American Newspaper Publishers' Association, or their proxies; and if the board thus constituted can not agree, it shall be authorized to select an addi-

tional member, and the decision of a majority of this board, thus constituted, shall be final and binding upon both parties.

Pending arbitration and decision thereunder work shall be continued as usual in the office of the publisher(s) part— to this agreement, and the award of the arbitrators shall, in all cases, include a determination of the issues involved covering the period between the raising of the issues and the final settlement, and any change or changes in the wage scale of employees, or other ruling, may, at the discretion of the arbitrators, be made effective from the date the issues were first made.

In case a local board of arbitration is formed, and a decision rendered which is unsatisfactory to either side, then a review may be asked of the National Board of Arbitration by the dissatisfied party. Pending decision under such review from a local board of arbitration, work shall be continued as usual in the office of the publisher(s), part—to the case, and the award of the National Board of Arbitration shall, in all cases, include a determination of the issues involved, covering the period between the raising of the issues and their final settlement; and any change or changes in the wage scale of employees, may, at the discretion of the board, be made effective from the date the issues were first made.

In consideration of the agreement by the said publisher(s) or proprietor(s) to arbitrate all differences as provided for herein with the ——— union(s), the International Typographical Union agrees to underwrite the said contract and guarantee ——— fulfillment on the part of ——— union(s).

It is expressly understood and agreed that the sections numbered from one to sixteen inclusive, of the agreement between the American Newspaper Publishers' Association and the International Typographical Union hereunto attached shall be considered an integral part of this contract, and shall have the same force and effect as though set forth in the contract itself.

This contract shall be in full force and effect from ———, 1902, to the first day of May, 1907, unless amended sooner by mutual consent.

In witness whereof, the undersigned publisher(s) or proprietor(s) of the said newspaper and the president of the International Typographical Union have hereunto affixed their respective signatures, in triplicate this ——— day of ———, 190—.

Publisher(s) or Proprietor(s) _____

President International Typographical Union.

Witness, as to publisher,

Witness, as to president,

SEC. 16. This covenant between the International Typographical Union and the American Newspaper Publishers' Association shall remain in effect from the 1st day of May, 1902, to the 1st day of May, 1907, but amendments may be proposed to this agreement by either party thereto at least ninety days before the 1st day of May in any year, and on acceptance by the other party to the agreement, shall become a part thereof.

Now, therefore, it is mutually agreed as follows:

First. This agreement shall be published simultaneously by the two bodies at such time as may hereafter be decided upon.

Second. The agreement shall be submitted for ratification to the American Newspaper Publishers' Association at its annual meeting in February, 1902, and immediately thereafter to the executive council of the International Typographical Union. If formally ratified as a whole by both bodies, it shall become effective on May 1, 1902, and remain in full force and effect for five years thereafter, unless mutually amended sooner as therein provided for.

In witness whereof, we have hereunto affixed our signatures this 3d day of January, 1902.

(Signed)

A. A. McCORMICK, *Chairman.*

M. J. LOWENSTEIN,

*For the special standing committee of the American
Newspaper Publishers' Association.*

FREDERICK DRISCOLL,

Commissioner.

JAMES M. LYNCH,

C. E. HAWKES,

HUGO MILLER,

J. W. BRAMWOOD,

For the International Typographical Union.

The attached agreement was unanimously approved of by the American Newspaper Publishers' Association at its annual convention on February 19, 1902, and subsequently the same was approved by the executive council of the International Typographical Union, acting under authority from the International Typographical Union convention.

W. C. BRYANT, *Secretary.*

ARBITRATION AGREEMENT BETWEEN AMERICAN NEWSPAPER PUBLISHERS' ASSOCIATION AND INTERNATIONAL PRINTING PRESSMEN'S AND ASSISTANTS' UNION.

SECTION. 1. On and after May 1, 1902, and until May 1, 1907, any publisher who is a member of the American Newspaper Publishers' Association employing union labor in the pressroom of his office, under an existing contract, either written or verbal, with a local pressmen's union chartered by the International Printing Pressmen's and Assistants' Union, shall be protected under such contract by the International Printing Pressmen's and Assistants' Union against walk-outs, strikes, boycotts, or any other form of concerted interferences with the peaceful operation of labor in his press rooms so contracted for by said local pressmen's union. Likewise in case of the termination of said contracts, labor in said press rooms shall be continued by said union, and if differences arise in the framing of a new contract as to wages, hours, etc., they shall be settled first by conciliation, if possible, and if not, then by arbitration, as provided in this agreement.

Provided, The said publisher shall enter into an agreement with the International Printing Pressmen's and Assistants' Union to arbitrate all differences that may arise between the said publisher and the mem-

bers of the Pressmen's Union in his employment, in case said differences can not first be settled by conciliation and mutual agreement.

SEC. 2. If conciliation between the publisher and the local union fails, then provision must be made for local arbitration. If local arbitration or arbitrators can not be agreed upon, all differences shall be referred, upon application of either party, to the International Board of Arbitration. In case a local board of arbitration is formed, and a decision rendered which is unsatisfactory to either side, then an appeal may be taken to the International Board of Arbitration by the dissatisfied party.

SEC. 3. In cases of appeal from a local board of arbitration, the International Board of Arbitration shall not take evidence, except by a majority vote of the board; but the appellant and the appellee may be required to submit records and briefs, and to make oral or written arguments (at the option of the board) in support of their respective contentions. The parties to the controversy may submit an agreed statement of facts, or a transcript of testimony properly certified to, before a notary public, by the stenographer taking the original evidence or depositions.

SEC. 4. Pending decision under such appeal, work shall be continued in the press room of the publisher, party to the case, and the award of the International Board of Arbitration shall, in all cases, include a determination of the issues involved, covering the period between the raising of the issues and the final settlement; and any change or changes in the wage scale of employees, may, at the discretion of the board, be made effective from the date the issues were first made.

SEC. 5. If in case any number of newspaper publishers of any city forming a local publishers' association enter into contract verbal or written with the Pressmen's Union of said city under the jurisdiction of the International Printing Pressmen's and Assistants' Union, then, and in that case, such association shall enjoy all the rights and be subjected to all the obligations hereby applying to any individual publisher as noted above.

SEC. 6. Employers whose press rooms are operated by members of the Pressmen's Union under the jurisdiction of the International Printing Pressmen's and Assistants' Union, and in which press rooms disputes or differences arise which can not be settled locally, shall have the right to demand the services of the International Board of Arbitration.

SEC. 7. In like manner local unions of the International Printing Pressmen's and Assistants' Union, becoming involved in disputes with a publisher concerning the operating of the press rooms heretofore described, and which can not be settled locally, shall have the right to demand the services of the International Board of Arbitration.

SEC. 8. The words "union press rooms" as herein employed shall be construed to refer only to such press rooms as are operated wholly by union employees, in which union rules prevail, and in which the union has been formally recognized by the employer.

SEC. 9. It is understood that this agreement shall apply to individual members of the American Newspaper Publishers' Association, or publishers connected with its labor bureau, or local associations of publishers accepting it and the rules drafted hereunder, at least thirty days before a dispute shall arise.

SEC. 10. The International Board of Arbitration shall consist of the president of the International Printing Pressmen's and Assistants' Union and the commissioner of the American Newspaper Publishers' Association, or their proxies, and in the event of failure to reach an agreement, these two shall select a third member in each dispute, the member so selected to act as chairman of the board. The finding of a majority of the board shall be final, and shall be accepted as such by the parties to the dispute under consideration.

SEC. 11. In the event of either party to the dispute refusing to accept and comply with the decision of the International Board of Arbitration, all aid and support to the firm or employer or local union refusing acceptance and compliance, shall be withdrawn by both parties to this agreement. The acts of such recalcitrant employer or union shall be publicly disavowed, and the aggrieved party to this agreement shall be furnished by the other with an official document to that effect.

SEC. 12. The said International Board of Arbitration must act, when its services are desired by either party to a dispute as above, and shall proceed with all possible dispatch in rendering such service.

SEC. 13. All expense attendant upon the settlement of any dispute, except the personal expenses of the president of the International Printing Pressmen's and Assistants' Union and of the commissioner of the American Newspaper Publishers' Association, shall be borne equally by the parties to the dispute.

SEC. 14. The conditions obtaining before the initiation of the dispute shall remain in effect pending the finding of the local or International Board of Arbitration.

SEC. 15. The following rules shall govern the International Board of Arbitration in adjusting differences between parties to this agreement:

1. It may demand duplicate typewritten statements of grievances.
2. It may examine all parties involved in any differences referred to it for adjudication.
3. It may employ such stenographers, etc., as may be necessary to facilitate business.
4. It may require affidavit on all disputed points.
5. It shall have free access to all books and records bearing on points at issue.
6. Equal opportunity shall be allowed for presentation of evidence and argument.
7. Investigation shall be conducted in the presence of representatives of both parties.
8. The deliberations of the board shall be conducted in executive session, and the findings, whether unanimous or not, shall be signed by all members of the board in each instance.
9. In the event of either party to the dispute refusing or failing to appear or present its case after due notice, it may be adjudged in default and findings rendered against such party.
10. All evidence communicated to the board in confidence shall be preserved inviolate and no record of such evidence shall be kept.

SEC. 16. The form of contract to be entered into by the publishers and the International Printing Pressmen's and Assistants' Union shall be as follows:

FORM OF CONTRACT.

It is agreed between ———, publisher(s) or proprietor(s) of the ——— of ———, by ———, duly authorized to act in its behalf, party of the first part, and the International Printing Pressmen's and Assistants' Union, party of the second part, by its president, duly authorized to act in its behalf, and also in behalf of the ——— Pressmen's Union, No. ———, of ———, as follows:

That any and all disputes or differences that may arise between ——— publisher(s) or proprietor(s) and Pressmen's Union No. ———, or any member thereof employed in the press room department of the ———, shall first be settled by conciliation between the publisher and the authorities of the local union if possible. If not, the matter shall be referred to arbitration, each party to the controversy to select one arbitrator, and the two thus chosen to select a third, the decision of a majority of such board of arbitration to be final and binding upon both parties, except as hereinafter provided for.

If local arbitration or arbitrators can not be agreed upon, all differences shall be referred, upon application of either party, to the International Board of Arbitration, consisting of the president of the International Printing Pressmen's and Assistants' Union and the commissioner of the American Newspaper Publishers' Association, or their proxies; and if the board thus constituted, can not agree, it is hereby authorized to select an additional member, and a decision of the majority of this board, thus constituted, shall be final and binding upon both parties.

Pending arbitration and decision thereunder, work shall be continued as usual in the press room of the publisher party to this agreement, and the award of the arbitrators shall, in all cases, include a determination of the issues involved, covering the period between the raising of the issues and the final settlement, and any change or changes in the wage scale of the employees, or other ruling, may, at the discretion of the arbitrators, be made effective from the date the issues were first made.

In case a local board of arbitration is formed and a decision rendered which is unsatisfactory to either side, then an appeal may be taken to the above-described International Board of Arbitration by the dissatisfied party. Pending decision under such appeal from a local board of arbitration, work shall be continued as usual in the press room of the publisher, party to the case, and the award of the International Board of Arbitration shall in all cases include a determination of the issues involved, covering the period between the raising of the issues and their final settlement, and any change or changes in the wage scale of the employees may, at the discretion of the board, be made effective from the date the issues were first made.

In consideration of the agreement by the said publisher(s) or proprietor(s) to arbitrate all differences arising under existing verbal or written contracts, or during the period intervening between the termination of the latter and the execution of new contracts, with the Pressmen's Union No. ——— of ———, the International Printing Pressmen's and Assistants' Union hereby agrees to underwrite the said existing contract, and guarantees its fulfillment, together with the peaceful adjustment on terms above stated, of all difficulties otherwise arising on the part of the said Pressmen's Union No. ——— of ———.

It is expressly understood and agreed that sections numbered from one to seventeen, inclusive of the agreement between the American Newspaper Publishers' Association and the International Printing Pressmen's and Assistants' Union, hereunto attached, shall be considered an integral part of this contract, and shall have the same force and effect as though set forth in the contract itself.

This contract shall be in full force and effect from ——— day of ———, 1902, to 190—, unless terminated sooner by mutual consent, and thereafter upon ninety days' written notice from either party to this agreement.

In witness whereof, the undersigned publisher(s) or proprietor(s) of the said newspaper, and the president of the International Printing Pressmen's and Assistants' Union, have hereunto affixed their respective signatures this ——— day of ———, 1902.

SEC. 17. This covenant between the International Printing Pressmen's and Assistants' Union and the American Newspaper Publishers' Association shall remain in effect from the first day of May, 1902, to the first day of May, 1907, but amendments may be proposed to this agreement by either party thereto, at least ninety days before the first of May in any year, and on acceptance by the other party to the agreement, shall become a part thereof.

Now, therefore, it is mutually agreed as follows:

First. This agreement shall be published simultaneously by the two bodies at such time as may hereafter be decided upon.

Second. The agreement shall be submitted for ratification to the American Newspaper Publishers' Association at its annual meeting in February, 1902, and immediately thereafter to the referendum of the International Printing Pressmen's and Assistants' Union. If formally ratified as a whole by both bodies, it shall become effective on May 1, 1902, and remain in full force and effect for five years thereafter unless mutually amended sooner as therein provided for.

In witness whereof, we have hereunto affixed our signatures this twentieth day of January, 1902.

A. A. McCORMICK, *Chairman.*

M. J. LOWENSTEIN,

*For the special standing committee of the American
Newspaper Publishers' Association.*

FREDERICK DRISCOLL,

Commissioner.

MARTIN P. HIGGINS,

EDWIN A. BAULSIR,

D. J. McDONALD,

W. H. BURKLIN,

W. J. WEBB,

*For the board of directors of the International Printing
Pressmen's and Assistants' Union.*

The attached agreement was unanimously approved of by the American Newspaper Publishers' Association at its annual convention on February 19, 1902, and subsequently the same was approved by the referendum of the International Printing Pressmen's and Assistants' Union by a large majority.

W. C. BRYANT, *Secretary.*

AGREEMENT BETWEEN UNITED TYPOTHETÆ OF AMERICA AND INTERNATIONAL PRINTING PRESSMEN AND ASSISTANTS' UNION.

This agreement, made and entered into this twenty-fifth day of March, 1903, by and between the United Typothetæ of America and the International Printing Pressmen and Assistants' Union, for the purpose of establishing between the employing printers of the United States and their pressmen and feeders uniform shop practices and fair scales of wages, settlement of all questions arising between them, and the abolition of strikes, sympathetic or otherwise, lockouts and boycotts,

Witnesseth, that any question arising between a local Typothetæ or affiliated association of employers and their pressmen or feeders in regard to wages or shop practices shall be referred to the local conference committee, made up equally of representatives from the local Typothetæ and the local union. Should this committee be unable to agree, or should one of the parties consider itself aggrieved by said committee's findings, either party to the conference may refer the question at issue to the national conference committee, which national conference committee shall act as hereinafter set forth.

Both local and national conference committees, in settling questions of shop practice, shall aim at the establishment of uniform shop practice throughout the United States and Canada. Unless special contracts to the contrary exist, any finding of the national committee in regard to shop practice shall be binding upon local organizations.

A ruling upon a question of shop practice shall be made within three months after the presentation of such question to the conference committee of either side, and such ruling when once established by said committee shall not be reconsidered within two years.

Any change in the scale of wages shall be settled by conference or arbitration within four months after the first request for consideration, but shall not go into effect until one year after the first request for consideration; and no scale of wages shall be changed oftener than once in three years; provided, however, that all such scales of wages shall terminate with the expiration of this contract unless specifically agreed to the contrary.

All present contracts between the local Typothetæ or affiliated organizations of employers and their pressmen and feeders shall continue in force until their natural expiration.

A contract accepting a particular scale of wages does not include the acceptance of any rules in the union in regard to shop practice not specially mentioned in said contract.

The International Printing Pressmen and Assistants' Union shall not engage in any strike, sympathetic or otherwise, or boycott, unless the employer fails to live up to this contract, it being understood that the employer fulfills all the terms of this contract by paying the scale of wages and living up to the shop practices as settled by the committee, regardless of his employees' union affiliations; no employer shall engage in any lockout unless the union or members thereof fail to live up to this contract; the conference or arbitration committee to be the final judge of what constitutes a failure to live up to this contract.

Pending investigation or arbitration, the men shall remain at work. The conference committee shall fix the time when any decision shall take effect, except the question of wages, which is heretofore provided for.

In the event of either party to the dispute refusing to accept and comply with the decision of the National Board of Arbitration, all aid and support to the firm or employer or local union so refusing acceptance and compliance shall be withdrawn by both parties to this agreement. The acts of such recalcitrant employer or union shall be publicly disavowed, and the aggrieved party to this agreement shall be furnished by the other with an official document to that effect.

In the event of a strike in a non-Typothetæ office, if it is proven to the local conference committee that such office is not complying with the shop rules and practices and scale of wages in accordance with the terms of this contract, no assistance shall be given to such office by Typothetæ members.

This agreement shall continue in full force and effect until May 1, 1907. It is expressly agreed that during the life of this contract fifty-four hours shall constitute a week's work. Notice of any desired changes in the contract must be given by either party to the contract at least three months prior to the expiration thereof.

Manner of arbitration: Each party to this contract shall appoint two of its members who shall be known as its members of the National Board of Conference and Arbitration. These members may be changed at the will of the respective parties except during the negotiation of any particular question, during which time the membership of such board shall continue the same. In case of the death of any member of such board during the consideration of a question, the place of such deceased member shall be filled by his party, and the entire proceeding shall thereupon begin again. This board shall meet upon a request of the president or presiding officer of either party at some point to be mutually agreed upon, within one month of such request, and shall take such evidence as it may consider bears upon the subject in hand. A majority of votes cast upon any question shall be binding upon both parties to this agreement. Should the vote upon any question result in a tie, this board shall select a fifth person to act as arbitrator, who shall for this particular question act as a member of such board, and the decision of such constituted board shall be binding upon the parties hereto.

Signed in duplicate.

UNITED TYPOTHETÆ OF AMERICA,

[SEAL.]

By EDWARD STERN, *President*.

EDWIN FREEGARD, *Secretary*.

INTERNATIONAL PRINTING PRESSMEN AND ASSISTANTS' UNION,

By MARTIN P. HIGGINS, *President*.

WM. J. WEBB, *Secretary*.

AGREEMENT BETWEEN MASTER BRICKLAYERS' B. AND P. ASSOCIATION AND INTERNATIONAL JOURNEYMEN BRICKLAYERS' UNIONS, NOS. 1, 2, AND 3, OF MISSOURI.

It is hereby agreed to by and between the Master Bricklayers' B. and P. Association and the International Journeymen Bricklayers' Unions Nos. 1, 2 and 3, of Missouri, for a period of one year, from April 1, 1903—

FIRST. That the minimum wages of bricklayers from April 1, 1903, shall be sixty-five cents (65 cents) per hour, and that eight hours shall constitute a day's work (excepting Saturday), from 8 a. m. to 5 p. m., for the months beginning March 1. and ending October 31, inclusive,

and from 8 a. m. to 4:30 p. m. for the months beginning November 1 and ending March 1, inclusive; Saturdays from 8 a. m. to 12 m.; one hour to be taken for dinner during the former months and one-half hour during the latter, not more than four hours to be worked during the forenoon or afternoon; Sunday work, night work and work done after the regular hours for quitting shall be considered overtime and shall be charged for at a double rate of wages. No work shall be done on Saturdays from 12 m. to 5 p. m. except where life or property is in danger, or in case of emergency. No work shall be performed on the following holidays: Fourth of July, Labor Day, and Christmas Day.

SECOND. That the unions as a whole or single union shall not order any strikes against the members of the Master Bricklayers' B. and P. Association, collectively or individually; nor shall any member [number] of union men leave the work of a member of the Master Bricklayers' B. and P. Association. All disputes arising between the parties to this agreement must be brought at once before the joint board of arbitration for settlement.

THIRD. That no member of the union shall be discharged for inquiring after the cards of the men working upon any job of a member of the Master Bricklayers' B. and P. Association, nor will the walking delegate be interfered with when visiting any building under construction.

FOURTH. Each contractor shall pay his men every Saturday before 12 m., in the lawful money of the United States. Should he fail to do so he shall be charged waiting time, the limit to be two days, ending the following Monday at the regular quitting time. When bricklayers are laid off for any cause they shall, upon their request, be paid in cash within two (2) hours after the lay-off. No member of the bricklayers' unions shall work for anyone not complying with all the rules and regulations herein agreed to.

FIFTH. Each contractor shall be allowed one apprentice to serve four years. After said apprentice has completed his third year of apprenticeship the master bricklayer will be permitted to employ another apprentice.

SIXTH. If a building shall be abandoned for any cause on which the wages of union bricklayers are unpaid, no member of the Master Bricklayers' B. and P. Association shall contract to complete the same until this debt is paid by the original or subsequent owner, or provided for in the contract. If a member of the Master Bricklayers' B. and P. Association is prevented from carrying out his contract on a building through insolvency of the owner or any other cause, no union bricklayer shall work on said building until the master bricklayers' contract has been equitably adjusted. Notice in writing stating amounts due in dispute must be filed with the secretary of the Master Bricklayers' B. and P. Association within two weeks of the stoppage of the work, giving full particulars, the secretary to give proper notice to unions and their representatives at the beginning and ending of the questions in dispute.

SEVENTH. That not more than one member of any firm will be permitted to work on the wall and lay brick.

EIGHTH. No work shall be done which will destroy the true principle of the trade, such as laying brick dry without mortar, building hollow walls in violation of city ordinances, filling interior of walls with lumber or rubbish, neglecting to throw up cross-joints when work is exposed to view unless otherwise specified, or any act which will jeopardize the true interests of the trade. For an infraction of this rule

It shall be the duty of the parties to this agreement to report the same to the city authorities.

NINTH. That the arbitration board meet the 1st and 3d Mondays of each month at 5 p. m., at such place as may hereafter be designated.

TENTH. When journeymen bricklayers are employed by others than contractors legitimately engaged in the brick contracting business they shall demand and receive ten cents (10 cents) per hour over and above the regular scale of wages. Journeymen bricklayers may, however, work for manufacturers who employ bricklayers continuously at their plants at the regular scale of wages ("such firms to be registered with the several organizations").

MASTER BRICKLAYERS' B. AND P. ASSOCIATION.

JAS. PETTY.

WM. McMAHON.

EUGENE BRUNK.

JOHN KENNEDY.

LEE REDMOND.

H. W. KIEL.

G. T. BARRY.

H. C. GILICK.

GEORGE WARNER.

JOS. E. DOYLE.

THOS. ETHINGTON.

JOHN SCHMOLL.

HENRY HARTMAN, Jr.

B. BRINKMAN.

WM. ENGEL.

HENRY GAUSCH.

JOHN PUDIG.

JOS. L. KOLLY, *Chairman*.

AGREEMENT BETWEEN MASTER BRICKLAYERS' B. AND P. ASSOCIATION AND BUILDING LABORERS' INTERNATIONAL PROTECTIVE UNION OF AMERICA, NO. 3, OF ST. LOUIS, MO.

It is hereby agreed to by and between the Master Bricklayers' B. and P. Association and the Building Laborers' International Protective Union of America, No. 3, of the city of St. Louis, Mo., for a period beginning with the signing of this agreement and ending June 29, 1905:

FIRST. That the wages from June 29, 1903, to June 29, 1905, will be as follows:

For brick carriers, forty-two and one-half cents (42½ cents) per hour; for men working in mortar, forty-five cents (45 cents) per hour; that double time be allowed laborers for overtime while attending bricklayers, making mortar or working on holidays; that time and one-half be allowed laborers for overtime while making scaffolding or doing other work than attending bricklayers or making mortar.

SECOND. When laborers are laid off for a longer period than one day, they shall upon their request be paid in full within four (4) hours after said request. When laborers are discharged, they shall be paid immediately.

THIRD. Each contractor shall pay his men every Saturday before 12 m. in the lawful money of the United States. Should he fail to do so, he shall be charged waiting time, the limit of waiting time to be two (2) days ending the following Monday at the regular quitting time.

FOURTH. That eight (8) hours shall constitute a day's work (excepting Saturday), from 8 a. m. to 5 p. m. for the months from March 1 to October 31, and from 8 a. m. to 4.30 p. m. for the months from October 31 to March 1. One (1) hour to be taken for dinner during the former months and one-half ($\frac{1}{2}$) hour during the latter. Not more than four (4) hours to be worked during the forenoon or afternoon, excepting in the case of starting up the work, when mortar men shall start not exceeding half-hour before the regular time, and in case of brick carriers stocking a new scaffold not more than ten (10) minutes to be given for that purpose. All work performed during the hours not mentioned in this section shall be considered overtime, and shall be paid for as provided in section 1 of this agreement.

No work shall be performed on the following holidays: Fourth of July, Labor Day, Thanksgiving and Christmas Day.

FIFTH. That an arbitration board of equal representation, not exceeding three (3) members from each party hereto, shall be appointed by their respective organizations, parties to this agreement, to whom all matters in dispute of any and every description arising between the parties hereto, shall be referred, and their decision shall be absolutely final and binding on all parties hereto.

In the event that said arbitration board are unable to agree upon a settlement of any difficulty which may arise, they shall have the power to select as an umpire some disinterested party, not in anyway connected with the building business, and his decision shall be accepted as final and binding on all parties hereto.

Pending the settlement of any difficulty the hod carriers shall not, individually or collectively, quit the work of a member of the Master Bricklayers' B. and P. Association, but shall immediately submit the matter in dispute in writing to the chairman of this board.

The arbitration board shall meet within two (2) weeks after the signing of this agreement and effect a permanent organization; meetings may thereafter be held at the call of the chairman after twenty-four (24) hours' notice has been given to each member of said board. The mailing of notices to the last-known address of each member shall be considered sufficient notice.

SIXTH. The hod carriers shall not work for anyone not complying with all of the conditions of this agreement.

SEVENTH. When taking material off of machines, brick carriers may take off mortar and mortar men take off brick without any change in their respective wages. No brick carrier to work in mortar before starting time, such as tempering up and stocking of boards. It being understood that a fair proportion of mortar men will be at all times employed.

EIGHTH. No changes of any kind shall be made to this agreement except by a majority vote of the board of arbitration.

In witness whereof the parties hereto have caused this agreement to be signed by their respective presidents and secretaries on this 17th day of June, 1903.

MASTER BRICKLAYERS' B. AND P. ASSOCIATION,
 GEO. T. BARRY, *President.*
 H. W. KIEL, *Secretary.*

BUILDING LABORERS' INT. PROTECTIVE UNION OF AMERICA, No. 3,
 EDW. A. JONES, *President.*
 WILLIAM GARRETT, *Secretary.*

ARBITRATION PLAN BETWEEN BUILDING TRADES
EMPLOYERS' ASSOCIATION AND LABOR UNIONS IN
NEW YORK CITY, ADOPTED JULY 3, 1903, AND
EXPLANATORY CLAUSES ADOPTED JULY 9, 1903.

1. In general the employers and employees of each trade are organized. This applies particularly to the mechanics of the trade and those helpers' organizations from which the mechanics of that trade are largely derived.

2. Where an agreement exists between employers and employees all disputes in relation thereto shall be settled by a board of arbitration with an umpire, if necessary. The decision of said board or umpire shall be final. Should either side to the dispute fail to select an umpire, or fail to abide by the decision of the umpire, the dispute in question shall be referred to the general board of arbitration within twenty-four hours after such failure or refusal. The question of sympathetic strikes, or lockouts, and all questions as to the jurisdiction of trades must be referred to the general board of arbitration, it being agreed and understood that such kinds of work as have been heretofore recognized as being in the possession of a trade are not subjects for arbitration.

3. Each association represented in the Building Trades Employers' Association of the city of New York shall elect two arbitrators who shall serve for not less than six months.

4. Each union, the employers of which are represented in the Building Trades Employers' Association, shall elect two arbitrators who shall serve for not less than six months, and who shall be actively engaged in their trades for an employer in Greater New York at the time of their election.

5. The arbitrators from the unions shall not be business agents.

6. From this body of general arbitrators not less than four, two from the employers' association and two from the employees' unions, shall constitute a special arbitration board. They shall meet within twenty-four hours when notified so to do by the general secretary.

7. Those arbitrators from the unions who may be in the employment of members of this association are guaranteed reemployment by their firm or corporation when the special case on which they have served has been disposed of.

8. The unions as a whole or as a single union shall not order any strike against a member of the Building Trades Employers' Association collectively or individually, nor shall any number of union men leave the works of a member of the Building Trades Employers' Association, nor shall any member of the Building Trades Employers' Association lock out his employees before the matter in dispute has been brought before the general arbitration board and settled.

9. Complaints shall be first addressed to the general secretary of the arbitration board, who shall be a paid employee, and by him be referred to the executive committee of the general arbitration board composed of an equal number of employers and employees, and it shall be their duty at once to organize a special arbitration board to decide the point at issue.

10. It shall be the privilege of any union or member of the employers' association to select from all the general arbitrators the individuals they desire to act for them, but no general arbitrator can act when the dispute is occurring in the trade which he represents.

11. The general arbitrators must be given power by the interest they are acting for.

12. Arbitration papers are to be drawn up stating specifically the matter in dispute, and that both sides agree to abide by the vote of the majority of the board or the decision of an umpire. The umpire must be selected before the case is opened.

13. These papers must be properly signed and sealed by the members of the board, each side receiving its copy. Then after a careful bearing of the case stenographically reported, the verdict obtained by a majority vote or decision of the umpire, shall be final and binding.

14. After a few trials, precedents will be established, which can be used to strengthen the position of either side in subsequent trials, and can be quoted as in our courts of law.

15. The members of this association agree to employ members of the trade unions only, directly or indirectly, when parties to this agreement. It is understood, however, that in any case where a trade union is unable to provide sufficient workmen, the employer or employers in that trade may hire workmen, not members, who shall become members of the union, if competent. That after the date of the signing of this agreement, no union shall become a party to this agreement without the consent of the executive committee.

16. *Resolved* that the wages now paid in the unskilled trades shall not be reduced nor the hours increased for one year from the date of the general acceptance of this agreement. In any difficulty arising in the unskilled trades, they may, through the mechanics of that particular trade, have representation in the general arbitration board.

EXPLANATORY CLAUSES ADOPTED JULY 9, 1903.

Be it resolved that article 15 shall be interpreted as follows:

That the matter of supplying sufficient workmen shall be left to the arbitration board of the individual trade to be governed by its trade conditions, but that in case of continued failure on the part of the unions to supply sufficient workmen, any member of the Building Trades Employers' Association may refer the matter to the general arbitration board for settlement.

Be it resolved that it is understood and agreed to by this conference that the first clause of article 16 applies to skilled as well as unskilled trades.

It is understood and agreed that all existing trade agreements remain in full force, except in so far as they may conflict with the above arbitration plan.

ARBITRATION PLAN BETWEEN BUILDING TRADES EMPLOYERS' ASSOCIATION AND LABOR UNIONS IN NEW YORK CITY, ADOPTED JULY 3, 1903, AND EXPLANATORY CLAUSES ADOPTED JULY 9, 1903.

1. In general the employers and employees of each trade are organized. This applies particularly to the mechanics of the trade and those helpers' organizations from which the mechanics of that trade are largely derived.

2. Where an agreement exists between employers and employees all disputes in relation thereto shall be settled by a board of arbitration with an umpire, if necessary. The decision of said board or umpire shall be final. Should either side to the dispute fail to select an umpire, or fail to abide by the decision of the umpire, the dispute in question shall be referred to the general board of arbitration within twenty-four hours after such failure or refusal. The question of sympathetic strikes, or lockouts, and all questions as to the jurisdiction of trades must be referred to the general board of arbitration, it being agreed and understood that such kinds of work as have been heretofore recognized as being in the possession of a trade are not subjects for arbitration.

3. Each association represented in the Building Trades Employers' Association of the city of New York shall elect two arbitrators who shall serve for not less than six months.

4. Each union, the employers of which are represented in the Building Trades Employers' Association, shall elect two arbitrators who shall serve for not less than six months, and who shall be actively engaged in their trades for an employer in Greater New York at the time of their election.

5. The arbitrators from the unions shall not be business agents.

6. From this body of general arbitrators not less than four, two from the employers' association and two from the employees' unions, shall constitute a special arbitration board. They shall meet within twenty-four hours when notified so to do by the general secretary.

7. Those arbitrators from the unions who may be in the employment of members of this association are guaranteed reemployment by their firm or corporation when the special case on which they have served has been disposed of.

8. The unions as a whole or as a single union shall not order any strike against a member of the Building Trades Employers' Association collectively or individually, nor shall any number of union men leave the works of a member of the Building Trades Employers' Association, nor shall any member of the Building Trades Employers' Association lock out his employees before the matter in dispute has been brought before the general arbitration board and settled.

9. Complaints shall be first addressed to the general secretary of the arbitration board, who shall be a paid employee, and by him be referred to the executive committee of the general arbitration board composed of an equal number of employers and employees, and it shall be their duty at once to organize a special arbitration board^d at issue.

10. It shall be the privilege of any union or employers' association to select from all the general arbitrators they desire to act for them, but no general dispute is occurring in the trade while

11. The general arbitrators must be given power by the interest they are acting for.

12. Arbitration papers are to be drawn up stating specifically the matter in dispute, and that both sides agree to abide by the vote of the majority of the board or the decision of an umpire. The umpire must be selected before the case is opened.

13. These papers must be properly signed and sealed by the members of the board, each side receiving its copy. Then after a careful hearing of the case stenographically reported, the verdict obtained by a majority vote or decision of the umpire, shall be final and binding.

14. After a few trials, precedents will be established, which can be used to strengthen the position of either side in subsequent trials, and can be quoted as in our courts of law.

15. The members of this association agree to employ members of the trade unions only, directly or indirectly, when parties to this agreement. It is understood, however, that in any case where a trade union is unable to provide sufficient workmen, the employer or employers in that trade may hire workmen, not members, who shall become members of the union, if competent. That after the date of the signing of this agreement, no union shall become a party to this agreement without the consent of the executive committee.

16. *Resolved* that the wages now paid in the unskilled trades shall not be reduced nor the hours increased for one year from the date of the general acceptance of this agreement. In any difficulty arising in the unskilled trades, they may, through the mechanics of that particular trade, have representation in the general arbitration board.

EXPLANATORY CLAUSES ADOPTED JULY 9, 1903.

Be it resolved that article 15 shall be interpreted as follows:

That the matter of supplying sufficient workmen shall be left to the arbitration board of the individual trade to be governed by its trade conditions, but that in case of continued failure on the part of the unions to supply sufficient workmen, any member of the Building Trades Employers' Association may refer the matter to the general arbitration board for settlement.

Be it resolved that it is understood and agreed to by this conference that the first clause of article 16 applies to skilled as well as unskilled trades.

It is understood and agreed that all existing trade agreements remain in full force, except in so far as they may conflict with the above arbitration plan.



RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS. MARYLAND.

Eleventh Annual Report of the Bureau of Statistics and Information of Maryland, 1902. Thomas A. Smith, Chief. viii, 372 pp.

The subjects presented in this report are the following: Cost of living and wages, 21 pages; strikes, 26 pages; organized labor, 5 pages; sweat shops, 83 pages; free employment agency, 8 pages; oyster industry, 17 pages; canning industry, 15 pages; agriculture, 11 pages; coal output for 1902, 4 pages; making of good roads, 6 pages; Maryland in the Twelfth Census, 94 pages; new incorporations, 19 pages; new legislation, 20 pages; taxation, 19 pages.

COST OF LIVING AND WAGES.—Statistics are presented showing the retail prices of coal, coal oil, and a number of food products in 1892, 1895, 1901, and 1902. The wages paid and hours of labor are shown for selected occupations in the building trades, railroad shops, and iron works for the years 1890 to 1902. The income and expenditures of 40 families are also given. A number of interviews with the families of workmen close the discussion.

STRIKES.—During 1902 there occurred in the State 29 strikes, 16 of which were in the city of Baltimore. The question of wages entered into about 70 per cent of the 29 strikes, 15 of which were ordered by labor organizations and 14 undertaken by unorganized working people. Of the 15 strikes ordered by labor organizations 12 were successful, 2 unsuccessful, and 1 was still pending at the close of the inquiry. Of the 14 strikes not ordered by labor organizations 6 were successful and 8 unsuccessful. Nine of the strikes which were successful resulted in increased pay for the employees of 10 per cent or upward, and 11 of the total number of strikes were settled by voluntary arbitration or agreement. The number of strikers was 2,511, throwing 3,047 persons out of employment. The wage loss is reported at \$62,520, or \$20.52 per employee. The loss to employers is estimated at \$25,850.

ORGANIZED LABOR.—The State labor bureau secured returns from 72 local labor organizations, including a list of their secretaries, date of organization, rates of wages, etc. Of the 72 unions, 1 (Baltimore Typographical Union, No. 12) was organized as far back as 1831, 11 were organized in 1900, and 15 in 1902; 17 unions reported that they

were incorporated under State laws; 33 unions worked full time during the year 1902; 14 unions reported that they have a work day of 8 hours, and 35 a work day of 9 hours, a few of the latter having 8 hours on Saturday; 33 unions reported having received an increase of wages during 1902, running from 5 per cent up to as much as \$1 per day, and 3 reported a decrease of wages.

SWEAT SHOPS.—In order to further correct the sweat-shop evil, at the January session of 1902 the State legislature passed an amendment to the existing factory-inspection laws providing for the appointment, under the jurisdiction of the chief of the bureau of industrial statistics, of two inspectors; and, further, that after the shops and places of manufacture had been inspected a permit should be granted by the said chief specifying the number of hands that could work in the rooms where the manufacturing was done. In carrying out the provisions of the amendment the work of inspection commenced in the city of Baltimore, on July 1, 1902. There were 1,423 buildings inspected, in which 1,831 rooms were inspected and 1,480 closets inspected and reported. The number of permits issued was 1,309. In rooms for which permits were issued 11,849 persons were employed. Living in the houses inspected were 1,593 families, consisting of 7,335 persons. Of 9,172 persons working in these rooms, 2,273 were members of the occupying families, and 6,899 were persons not members of these families. Of the total, 5,292 were males and 3,880 were females. There were employed under 16 years of age 367 persons, 147 males and 220 females; under 12 years of age 26 were employed, 7 males and 19 females. In 213 cases the law was being violated by overcrowding. A case brought to test the constitutionality of the law has been carried to the State court of appeals, the decision of which is not yet published.

FREE EMPLOYMENT AGENCY.—By an amendment to the law creating the bureau of labor, the legislature at the session of 1902 provided for a free State employment agency to be organized and operated by the chief of the bureau. The agency was organized and went into operation on July 1, 1902. A summary of the work accomplished by the agency during the first six months of its existence is as follows: There were filed 634 applications for positions, 507 by males and 127 by females; for help, 696 applications were filed, 305 being for males and 391 for females. Positions were secured, so far as the agency was subsequently notified, by 115 males and 90 females. It is believed, however, that many secured positions who afterwards failed to notify the agency.

THE OYSTER INDUSTRY.—Under this caption is presented a summary of the oyster tax and license laws and statistics of the industry, including persons and vessels employed, capital invested, total catch, etc. Returns from 40 oyster packers, for the season, May, 1901, to May, 1902, show that the firms handled 1,768,536 bushels of oysters,

of which they shucked 1,765,734 bushels. They packed raw 1,350,734 bushels and packed steamed 323,421 bushels. Employment was given to 3,702 people, of which 2,292 were men, 1,150 women, and 260 children. To these working people were paid during the year \$368,984 in wages.

THE CANNING INDUSTRY.—Statistics are given of the pack of certain fruits and vegetables for the season 1902. Returns received from 312 establishments give \$2,057,550 as the estimated value of plants, \$2,118,704 as the amount paid for raw materials, and \$5,161,988 as the amount expended for other materials and general expenses. A total of \$1,065,539 in wages was paid to 4,471 men, 12,876 women, and 7,189 children. The total pack of fruit and vegetables amounted to 6,564,061 cases. The canning industry is the third largest industry in the State.

MARYLAND IN THE TWELFTH CENSUS.—In this part of the report are reproduced statistics of population, manufactures, and agriculture from the reports of the Twelfth Census. For purposes of comparison, in addition to the data for the State, facts for the United States as a whole are given.

NEW LEGISLATION.—Under this head is found a reprint of the laws relating to labor passed at the 1902 session of the legislature.

MICHIGAN.

Twentieth Annual Report of the Bureau of Labor and Industrial Statistics, including the Tenth Annual Report of the Inspection of Factories. 1903. Scott Griswold, Commissioner. xxiii, 531 pp.

In addition to factory, store, hotel, and tenement-house inspection, and the woman inspector's work, 319 pages, the following subjects are presented in this report: Cost of living and wages, 9 pages; organized labor, 27 pages; important manufacturing industries, 21 pages; the milling industry, 61 pages; the peppermint industry, 10 pages; special industries, 30 pages; penal and reformatory institutions, 14 pages; coal mines, 16 pages; strikes, 6 pages; miscellaneous, 19 pages.

COST OF LIVING AND WAGES.—This consists of a contributed article in which the author makes a comparison between the present increased cost of living and the increased wages. The discussion is based upon statistics published by the Federal census, the Massachusetts labor bureau, and the market reports published in the daily papers, etc.

ORGANIZED LABOR.—A canvass by the bureau secured returns from 336 unions, whose membership on July 1, 1902, aggregated 26,890. The membership of these same unions one year previous was 18,891. The average hours constituting a day's work in all the unions was 9.4; the average number of months worked per year, 10.6. In all unions on July 1, 1902, the average daily wage was \$2.28; on July 1, 1901, the average was \$2.14. Of the 336 unions, 159 reported hours of labor shortened, 177 reported hours of labor not shortened; 218 reported

differences settled by arbitration, 118 reported differences settled otherwise; 205 reported having agreements with employers, 131 reported having no agreements; 274 reported having no strikes during the year, 62 reported having strikes, of which 40 reported results favorable to unions, 10 results not favorable, 6 reported strikes compromised, and 6 strikes still pending. There was paid in strike benefits during the year the sum of \$26,333.60. By the 113 unions having sick benefit funds, there was paid out during the year \$19,508.54 for such benefits. Summaries of suggestions of the unions as to needed legislation are presented.

IMPORTANT MANUFACTURING INDUSTRIES.—Short descriptions, showing size and value of plant, capital stock, number of employees, amount of pay roll, output, etc., are given of a number of individual establishments, representing some of the prominent industries of the State.

THE MILLING INDUSTRY.—Returns from a canvass of the milling industry of the State show a total of 717 mills, of which 509 were for flour and 208 for feed, representing an invested capital of \$6,190,630. Of the whole number of mills, 382 were operated by individuals, 280 by firms, and 55 by corporations. The mills gave employment to 129 superintendents, with wages averaging \$2.45 per day; to 145 foremen, with wages averaging \$2.13 per day; to 181 office employees, with wages averaging \$1.85 per day, and to 1,821 other employees, with wages averaging \$1.53 per day, or to a total of 2,276 employees, with wages averaging \$1.61 per day.

THE PEPPERMINT INDUSTRY.—The growth of peppermint and the manufacture of oil therefrom is now a prominent industry of the State. In no other section of the United States is there so much of peppermint grown as in six counties of southwestern Michigan. The number of growers of the plant canvassed was 299. In 1902 they had 6,411 acres devoted to its cultivation, and from the product of this acreage 82,420 pounds of oil were distilled. The growth of wormwood, tansy, and spearmint and the distillation of oil therefrom are being experimented upon.

SPECIAL INDUSTRIES.—This chapter is devoted to accounts of some of the special industries of the State, among which may be enumerated the growing of sugar beets and the manufacture of beet sugar, the manufacture of Portland cement, the growth and manufacture of flax, the growth and manufacture of chicory, and the manufacture of silk, featherbone, railway cars, pig iron, wood alcohol, grape juice, and chemicals by selected individual establishments.

The 16 beet-sugar factories of the State represent in cost of construction an original outlay of \$7,467,000. These 16 factories in the campaign of 1902-3 employed 1,037 skilled laborers at average daily wages of \$2.63 each, and 2,506 common laborers at average daily wages of \$1.81 each, or a total of 3,543 employees at average daily wages of

\$2.05 each. An average campaign for a sugar factory is one hundred and five days. The estimated output of sugar for the 16 factories was 96,800,000 pounds. During the growing season many of the factory workers find employment with the beet growers.

In 1902 the 14 Portland cement factories in the State gave employment to 1,648 persons at average daily wages of \$2.15 each. The average output was nearly 14,000 barrels per day. The original cost of the plants was an average of over \$600,000 each.

The 6 chicory factories of the State in 1902 employed an aggregate of 123 persons at average wages of \$1.66 per day each. The 6 flax mills manufactured 1,950 tons and gave employment to 185 persons. The 2 silk mills gave employment to 650 and 225 persons, respectively, and the featherbone industry gave employment to 225 persons whose monthly pay roll aggregated about \$7,000.

COAL MINES.—During 1902 the number of coal mines in operation each month averaged 21, which employed an average of 1,415 persons per day. The average number of hours worked per day was 7.7, and of days per month 21.3. The average daily earnings of employees amounted to \$2.75, the range being from \$1.54 to \$2.96. The amount of coal mined was 869,228 tons, at an average cost for mining of \$1.44 per ton. Accounts are given of 23 accidents that were reported to the mine inspector within the year.

STRIKES.—Accounts are given of the various labor troubles that occurred in the State during 1902, the greatest of which was in the coal-mining industry, the mines being practically at a standstill for over three months. No summaries of strikes are given.

MISCELLANEOUS.—In this chapter appears a reproduction of the laws creating the Michigan bureau of labor and the several labor laws governing factory inspection, etc.; also a brief synopsis of the child-labor laws of various States.

NORTH CAROLINA.

Sixteenth Annual Report of the Bureau of Labor and Printing of the State of North Carolina, for the year 1902. H. B. Varner, Commissioner. viii, 365 pp.

The eight chapters constituting this report treat of the following subjects: Agricultural statistics, 94 pages; miscellaneous factories, 46 pages; cotton and woolen mills, 42 pages; furniture factories, 14 pages; newspapers, 44 pages; trades, 72 pages; railroad employees, 7 pages; manufacturing enterprises, 38 pages. In connection with a number of these subjects letters are published expressing the views of the correspondents of the bureau on matters of interest to labor, including compulsory education, child labor, a shorter working day, etc. The report concludes with a directory of the bureaus of labor in the United States.

AGRICULTURAL STATISTICS.—Returns were secured by correspondence with representative farmers in every county of the State. The following summary indicates the scope of the inquiry: Value of land has increased in 65 counties, decreased in 2, and in 30 there has been no change; 69 counties report tendency to smaller farms, 9 to larger, and 19 no change. In 72 counties labor is reported scarce, in 22 plenty, and in 3 abundant; 93 counties report negro labor unreliable, 2 reliable, and 2 no negro labor; 56 counties report employment as being regular and 41 as being irregular. Increased cost of living is reported in 95 counties and in 2 no increase; 57 counties report increase of wages and 40 no increase. Monthly wages of farm laborers are, for men, from \$9.72 to \$15.49; for women, \$6.61 to \$10.08; for children, an average of \$5.57. Average cost of producing cotton is \$27.57 per 500-pound bale in 68 counties; 75 counties produce wheat, at an average cost of \$0.68 per bushel; 96 corn, at \$0.46 per bushel; 92 oats, at \$0.33 per bushel, and 58 tobacco, at \$6.44 per 100 pounds. The market price of cotton averages \$43.45 per 500-pound bale; of wheat, \$0.91 per bushel; of corn, \$0.88 per bushel; of oats, \$0.55 per bushel, and of tobacco, \$12.42 per 100 pounds. Eighty per cent of the farmers reporting favor a compulsory education law.

MISCELLANEOUS FACTORIES.—Tables are presented showing conditions in 268 factories, exclusive of furniture and tobacco factories and textile mills. Capital stock, horsepower, time in operation, hours of labor, wages, number of employees, etc., are shown for the various establishments, and inquiry is also made as to child labor and compulsory education. The number of employees reported is 9,630, of whom 917 are under 14 years of age. The average length of a day's work is 10½ hours, and \$1.95 the highest and \$0.70 the lowest average daily wages reported. Wages are paid weekly in 63 per cent of the establishments; 60 per cent report an increase of wages; 86 per cent oppose the employment of children under 14 years of age, and 14 per cent favor such employment. Compulsory education is favored by 86 per cent and opposed by 14 per cent. Of adult employees, 80 per cent read and write, and of children, 96 per cent.

COTTON AND WOOLEN MILLS.—This report ends with June 30, 1902, and covers 276 mills, operating 1,743,431 spindles, 38,501 looms, and 3,281 machines, using in all 73,825 horsepower. Of these mills, 220 are devoted to cotton manufacture. The number of employees is 46,569, of whom 23,011 are males, 22,629 females, and 929 children under 12 years of age. There are 109,781 persons dependent on the mills for a livelihood. Of the adult operatives, 84 per cent can read and write; of the children, 71 per cent. Hours of labor range from 10 to 12 per day. The highest average wages per day for operatives are \$1.90 for men and \$0.94 for women. The lowest average wages per day are \$0.58 for men and \$0.45 for women. The wages of children average \$0.85 per day.

The growth of cotton manufacturing in North Carolina since 1840 is shown in the statement following:

GROWTH OF COTTON MANUFACTURING, 1840 TO 1902.

Year.	Mills.	Spindles.	Looms.	Operatives.
1840.....	25	47,900	700	1,200
1850.....	28	40,000	800	1,600
1860.....	39	41,900	800	1,800
1870.....	33	39,900	600	1,500
1880.....	49	92,400	1,800	3,300
1890.....	91	337,000	7,300	8,700
1900.....	186	1,297,771	29,689	38,637
1902.....	220	1,743,431	38,501	46,569

FURNITURE FACTORIES.—The furniture industry of the State has grown so rapidly during the past few years that a separate chapter is devoted to it in this report. Returns were received from 106 factories with 4,095 employees. The highest average daily pay for adults is \$2.02; the lowest, \$0.66; the pay of children, \$0.36. Of factories reporting, 20 per cent pay weekly, 67 per cent biweekly, and 13 per cent monthly; 86 per cent report increase of wages, and 14 per cent no change. Of employees, 86 per cent read and write. Relative to employment of children under 14 years of age, 80 per cent of the manufacturers oppose such employment, while 20 per cent favor it; 92 per cent favor compulsory education, and 8 per cent oppose it.

TRADES.—The facts presented in this chapter were secured from representative men in the different trades and give the conditions existing throughout the State. Of the wage-earners making returns, 23 per cent report an increase of wages, 12 per cent a decrease, and 65 per cent no change; 65 per cent make full time, 32 per cent part time, and 3 per cent make no report; 93 per cent report cost of living increased, and 7 per cent no increase; 50 per cent favor a 10-hour day, 37 per cent an 8-hour day, 11 per cent a 9-hour day, and 2 per cent an 11-hour day; 93 per cent favor compulsory education, and 7 per cent oppose it.

RAILROAD EMPLOYEES.—The number of railroad employees in the State is reported at 11,157, exclusive of officers and office employees. The table following gives number and average wages for the various occupations:

OCCUPATIONS AND AVERAGE DAILY WAGES OF RAILROAD EMPLOYEES, 1902.

Occupations.	Number.	Average daily wages.	Occupations.	Number.	Average daily wages.
Station agents.....	609	\$0.88	Carpenters.....	458	\$1.59
Other station men.....	1,306	1.06	Othershopmen.....	1,044	1.15
Engineers.....	448	2.75	Section foremen.....	602	1.37
Firemen.....	691	1.17	Other trackmen.....	3,123	.76
Conductors.....	801	2.19	Switch, flag, and watch men.....	268	1.02
Other trainmen.....	770	.97	Telegraph operators.....	252	1.27
Machinists.....	286	2.21	Other employees.....	1,099	.99

During the year 29 employees were killed and 414 injured, resulting from the movement of trains; and 4 killed and 448 injured from other causes than the movement of trains.

MANUFACTURING ENTERPRISES.—This is a directory by counties of the manufacturing enterprises of the State, showing the town where located and the product turned out.

OHIO.

Twenty-sixth Annual Report of the Bureau of Labor Statistics of the State of Ohio, for the year 1902. M. D. Ratchford, Commissioner. 808 pp.

The report presents the following subjects: Laws governing the labor bureau, and recent Ohio laws and court decisions relating to labor, 66 pages; manufactures, 363 pages; working women, 324 pages; free public employment offices, 19 pages; list of bureaus of labor in the United States, 2 pages.

MANUFACTURES.—Statistics for 1901 are given showing, by industries, number of establishments reported, value of goods manufactured and sold, value of materials used, value of manufactured goods and materials on hand January 1, 1902, with capital invested; amount paid in wages during 1901, and number employed and salaries of office help; number of males and females employed each month, and monthly averages of males and females for 1901; also, by occupations, the number employed, and the average days worked, average daily wages, average yearly earnings, and average hours of daily labor for 1901.

These statistics are shown for each of the five principal cities, for the towns and villages, and by totals for the State. Comparisons between 1900 and 1901 are also made.

The summary following presents, for 1901, the principal data for ten of the leading industries and for all industries:

STATISTICS OF MANUFACTURES, 1901.

Industries.	Estab- lish- ments.	Capital invested.	Stock used.	Value of product.	Wages paid.	Emple- ees.	Average annual earnings.
Agricultural implements	42	\$9,799,050	\$5,467,232	\$11,675,845	\$2,723,913	5,280	\$515.89
Boots and shoes	58	6,477,079	11,584,158	19,350,045	4,201,299	13,023	322.60
Carriages and wagons	240	8,006,515	8,186,712	16,653,862	3,861,544	7,371	523.88
Cigars	328	2,512,046	8,209,052	8,228,585	2,086,675	6,800	306.86
Clothing	222	9,538,767	13,196,574	22,855,724	4,838,191	11,180	432.75
Flouring-mill products	108	8,536,858	20,717,881	24,325,941	1,070,261	2,459	435.24
Foundry and machine- shop products, and machinery	455	60,266,448	31,605,450	75,839,292	21,996,060	42,871	513.08
Furniture	134	7,291,757	3,658,454	8,654,975	2,403,207	6,264	383.65
Printing and binding	371	14,238,116	4,351,424	11,014,086	3,664,336	8,129	450.77
Steel, iron, and tin	72	34,437,525	22,963,096	83,649,999	19,681,963	30,940	636.13
All industries.....	5,329	458,461,670	280,817,032	598,332,713	134,662,008	284,023	474.12

Of the 10 industries considered in the above table the steel, iron, and tin industry shows the highest average annual earnings, the amount

being \$636.13, while the cigar industry shows the lowest, namely, \$306.86. The average for 5,329 establishments in the State was \$474.12. During 1901 there were 46,286 persons who received an average advance in wages of 8.4 per cent, or an aggregate of \$1,843,402, while 1,251 persons suffered an average reduction of 6.2 per cent, or an aggregate of \$26,774.

WORKING WOMEN.—The information presented under this head is a continuation of an investigation reported upon in the previous annual report. The prior inquiry related to the cities of Cleveland, Cincinnati, and Columbus, while the present canvass covers sixteen of the larger cities of the State. Returns are published showing, for 7,825 working women in 1901, occupations, nativity, age, weeks of employment, weeks of idleness by causes, weekly wages and income, living expenses, number of dependents, and average weekly savings. Of the 7,825 women interviewed, 7,558 were of American nativity, the next largest number being 171 of German nativity. The average age was 22 years, 1,982 being under 18 years of age, 4,241 between 18 and 25, and 1,602 over 25 years old. The average number of weeks of employment at present occupation was 40.5, and at other occupations 5.4. Weekly hours of labor averaged 57.6, and wages \$4.94. Expenses per week averaged \$2.55 for board and lodging, \$0.03 for rent, light, and heat, \$1.41 for clothing, and \$1.23 for other necessities. Their average weekly savings were \$0.12.^a The total number of dependents was 930. Brief text reports are also given relative to the conditions in the industries employing women.

FREE PUBLIC EMPLOYMENT OFFICES.—Brief text reports from the superintendents of the five offices, tables showing the work done by each office from the date of its organization, and reports of the operations of each office for each month of the year 1902, with totals for the year, are found under this head.

The following table shows the operations of the five free public employment offices of the State for the year 1902:

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, 1902.

City.	Situations wanted.		Help wanted.		Positions secured.	
	Males.	Females.	Males.	Females.	Males.	Females.
Cleveland	3,411	2,890	4,586	2,819	2,606	1,933
Columbus	1,616	1,443	2,439	2,855	1,447	1,417
Cincinnati	3,204	2,115	2,564	2,845	2,410	1,767
Dayton	3,981	2,491	4,472	7,194	3,147	2,090
Toledo	3,995	2,572	8,913	2,925	2,704	1,917
Total	16,157	10,811	17,974	18,689	12,814	9,114

^a For living expenses the averages were based upon the number of persons only who reported under that head, while the averages for wages were based upon the whole number of persons canvassed, hence the discrepancy between expenses and wages.

During 1902 there were 3,522 more males who applied for situations than in 1901, and 123 more females; the applications in 1902 for male help wanted exceeded those in 1901 by 6,247, and those for female help wanted by 2,092; the positions secured in 1902 for males exceeded those secured in 1901 by 4,159, and those secured for females by 432.

Since the organization in 1890 of the five free public employment offices there has been a total of 343,865 applications for situations wanted, 274,511 applications for help wanted, and 187,279 positions secured. Of applications for situations 54.5 per cent were filled, and of applications for help wanted 68.2 per cent were filled.

REPORTS OF STATE BOARDS OF ARBITRATION.

COLORADO.

Sixth Annual Report of the State Board of Arbitration. November 15, 1902. John F. Harley, Secretary. 55 pp.

The work of the board during the year covered by the report was seriously hampered by the opinion of the attorney-general of the State, handed down October 28, 1901, to the effect that the board had "no power to enforce obedience to its subpoenas, or to punish a refusal to testify; and furthermore, had no power to enforce its decisions."

The act of 1897, creating the State board of arbitration is reproduced, together with certain amendments suggested by the board to the legislature, which are designed to remedy the above defects in the law. During the year only four cases were brought before the board.

ILLINOIS.

Seventh Annual Report of the State Board of Arbitration. July 1, 1902. J. McCan Davis, Secretary. 275 pp.

During the year covered by this report 30 disputes in various forms occupied the attention of the board, 28 of which were strikes, 1 a lockout, and 1 a jurisdictional dispute between labor unions. The adjustments brought about through the good offices of the board are reported to have affected from 15,000 to 20,000 working people, and to have saved to employers, employees, and the general public, a sum amounting in the aggregate to several millions of dollars. The most effective and satisfactory work of the board was done as a board of conciliation rather than as one of arbitration.

In an appendix are extracts from the report of the United States Industrial Commission relating to collective bargaining, conciliation, and arbitration, a digest of State and national laws, establishing State boards of arbitration and providing for local boards of arbitration, with a summary of the working of such boards, and a circular of information prepared by the board relative to its powers and duties.

INDIANA.

Second and Third Biennial Reports of the Labor Commission, for the years 1899-1900 and 1901-2. L. P. McCormack and B. Frank Schmid, Commissioners. 150 pp.; 127 pp.

The above reports consist of a résumé of the experience and work of the commission, a detailed statement of each of the investigations and settlements made, and a reproduction of the law creating the labor commission.

During the biennial period 1899-1900 the commission made 46 investigations and settlements, and during the biennial period 1901-2 it made 38 investigations and settlements. The work of the commission has been generally satisfactory to both employers and employees.

MASSACHUSETTS.

Seventeenth Annual Report of the State Board of Conciliation and Arbitration, for the year ending December 31, 1902. B. F. Supple, Secretary. 331 pp.

In this report a review of the year's work of the board is followed by a detailed account of its proceedings in each of 193 controversies that came to its notice. In general the work of the board may be classified under three heads, which relate (1) to the formation of trade agreements or collective bargaining; (2) to arbitration cases, where points in dispute are left to the decision of the board; and (3) to conciliation cases, in which, by mediation between the parties to a controversy threatened or existing, the board endeavors to bring them together on some common ground. As the public becomes more familiar with its work there is a constantly increasing demand for the services of the board.

NEW YORK.

Fifteenth Annual Report of the Board of Mediation and Arbitration. 1901. John McMackin, Commissicner. 424 pp.

This report contains an account of the labor disputes within the State for the nine months ending September 30, 1901, together with full particulars of the more important disputes within the period, the text of agreements and awards terminating disputes, and a reprint of the arbitration laws of various States and foreign countries. There are also, reproduced from the Sixteenth Annual Report of the United States Commissioner of Labor, statistics of strikes and lockouts in New York State for the twenty-year period 1881 to 1900, and the report of the New South Wales commission of inquiry into the working of the New Zealand compulsory conciliation and arbitration law.

During the nine months covered by the report there were within the State 126 labor disputes, involving 649 establishments and 44,943 employees, or 71.9 per cent of the 62,536 employed before the disputes. Nearly one-half of the employees involved, or 22,097, were active participants in the strikes and lockouts, while the remaining 22,846 were thrown out of employment as a result of the disputes. Of the 649 establishments affected, 504 suspended work entirely for a longer or shorter period. The aggregate working days lost by employees was 815,097, of which 497,596 days were lost by those directly affected and 317,501 days by those indirectly affected.

Considering industries, the greatest number of disputes was in metals, machinery, etc., it being 40, followed by 28 disputes in the building trades and 18 in the clothing industry. Increase of wages was the cause of 45 disputes, hours of labor 31, and trade unionism 27. Of results of disputes, 48 were in favor of employees, 53 in favor of employers, and 25 were compromised.

The mode of settlement of the disputes reported was as follows:

MODE OF SETTLEMENT OF DISPUTES FOR THE NINE MONTHS ENDING SEPTEMBER 30, 1901.

Mode of settlement.	Number of disputes.	Employees involved.
Direct negotiations.....	72	17,042
Return to work on employers' terms.....	24	12,004
Replacement of workers.....	22	1,180
Closing of works.....	1	119
Mediation and conciliation.....	4	1,482
Arbitration.....	2	12,670
Otherwise.....	1	446
Total.....	126	44,943

It is seen from the above that direct negotiation of the parties was the most frequent method of settlement, 72 disputes, embracing 38 per cent of the workers, being terminated in that way. The other two forms of negotiation (mediation or conciliation and arbitration) were the means of settlement in but 6 cases. The number involved, however, in these 6 cases is large, owing to the fact that the bricklayers and masons' strike in New York City, which involved 12,500 men, was arbitrated. In 24 disputes, involving 12,004 workers, the employees gave up the fight and returned to work on the employers' terms, while in 22 disputes, involving 1,180 workers, the employees were replaced by others.

OHIO.

Eighth and Ninth Annual Reports of the State Board of Arbitration for the years ending December 31, 1900 and 1901. Joseph Bishop, Secretary. 131 pp; 103 pp.

These reports contain detailed accounts of 13 cases of dispute which were brought to the attention of the board during the year 1900 and

19 cases during the year 1901. The greater portion of these disputes were strikes or lockouts, while the others were settled before reaching that stage, either through the efforts of the board or otherwise. In the eighth annual report are reproduced the arbitration laws of the various States and a proposed bill for the amendment and revision of the Ohio law.

WISCONSIN.

Biennial Report of the State Board of Arbitration and Conciliation for the years 1899 and 1900. G. E. Willott, Secretary. 112 pp.

This report contains a review of the work of the board during the years 1899 and 1900, a detailed account of each case considered, and reproductions of the conciliation and arbitration laws of Wisconsin and other States.

The 28 controversies of which the board took cognizance during the two years included in this report involved more or less directly employees whose yearly earnings were estimated at \$3,000,000. The aggregate earnings under ordinary conditions of the establishments involved were estimated at about \$10,000,000. The total expenses incurred by the board during the two years amounted to \$1,746.98.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

GREAT BRITAIN.

Statistics of proceedings under the Workmen's Compensation Act, 1897, and the Employers' Liability Act, 1880, during the year 1900. 39 pp.
(Published by the Home Office.)

This report contains such statistical information as the Home Office could collect with reference to the workings of the workmen's compensation act, 1897, and the employers' liability act, 1880, during the year 1900. It shows for each of the countries, England and Wales, Scotland, and Ireland, statistics regarding the cases of arbitration under the workmen's compensation act in the county and sheriff courts and memoranda registered in the same, the number and results of actions in county and sheriff courts under the employers' liability act, statistics of the proceedings of each court, appeals to higher courts under each act, and a list of appeals under the workmen's compensation act. As these statistics cover only cases which have come before the courts, they leave untouched the great body of cases in which compensation was settled by agreement and by informal arbitration.

In England and Wales, during the year 1900, under the workmen's compensation act, 1,145 cases were dealt with by county court judges and county court arbitrators, as compared with 999 in the previous year. The number decided by judges increased from 828 to 1,046, while the number of cases in which it was necessary to appoint a special arbitrator had fallen from 98 to 29, and 70 cases were settled by acceptance of money paid into court. In addition to these there were 407 cases which were either withdrawn, settled out of court, or otherwise disposed of.

Of the claims for compensation cases finally settled within the courts 867 cases were in favor of the plaintiff and 194 in favor of the defendant. The award in 331 cases was a lump sum, and in 536 cases a weekly payment. Compensation in 248 cases was awarded on account of death. Omitting 3 cases in which the deceased left no dependents, there remains 245 cases in which compensation amounting to £40,042 13s. 11d. (\$194,867.78) was awarded to the dependents, or an average in each case of £163 8s. 9d. (\$795.37). With regard to the awards of compensation for the 619 cases of injury, in 88 cases the compensation

was in a lump sum, averaging £39 8s. 11d. (\$190.75) per case, and in 536 cases a weekly sum was assigned, 300 being cases of total and 236 cases of partial disability. The average weekly allowance in the former was 11s. 6d. (\$2.80); and in the latter 10s. 9d. (\$2.62).

The cases in which memoranda were registered in county courts numbered 1,253, of which 1,188 were settled by agreement, 40 by committee, and 25 by agreed arbitrator. There were 116 cases of death, 605 of total disability, and 532 of partial disability. The average award to dependents in case of death was £171 14s. 2d. (\$835.62), the average weekly payment in case of total disability 14s. 3d. (\$3.47), and in case of partial disability 13s. 1d. (\$3.18).

During the year 1900 the cases under the employers' liability act in county courts numbered 511, of which 158 resulted in favor of the plaintiff, 74 in favor of the defendant, 2 were removed to a higher court, and 277 were otherwise disposed of. The damages awarded amounted to £11,196 13s. 6d. (\$54,488.62), the average in case of death being £158 16s. 7d. (\$772.94).

The number of cases under the workmen's compensation act carried to the court of appeal was 90, of which 31 were appeals by workmen and 59 by employers. There were 7 appeals to the House of Lords, 6 by workmen and 1 by employers. Under the employers' liability act there were 15 appeals to the high court of justice, 6 by workmen and 9 by employers.

Up to December 31, 1900, 49 compensation schemes had been certified by the registrar of friendly societies, affecting 132,009 workmen. These were distributed among the following industries: Railways, 2 schemes, affecting 41,174 workmen; factories, 18 schemes, affecting 16,444 workmen; mines, 28 schemes, affecting 73,871 workmen; quarries, 1 scheme, affecting 470 workmen.

In 1900 there were 2,314 deaths by accident in railways, factories, mines, and quarries. Of claims for compensation 327 cases, or 14 per cent of all deaths, were brought before the county courts, 308 being under the workmen's compensation act and 19 under the employers' liability act. As regards claims for injury, it is believed that the number of litigated cases was less than 1 per cent of the total number of cases in which compensation was payable. Therefore, the cases which come before the courts represent but a small proportion of those in which compensation is paid under the acts; the great majority are settled by agreement, and only a small percentage are carried to formal arbitration.

In Scotland, of the 307 cases under the workmen's compensation act during 1900 coming before the sheriff courts, 191 were decided by award of the judge and 116 were withdrawn or otherwise settled out of court. Of the 191 cases settled in court, 136 were in favor of the

plaintiff, 53 in favor of the defendant, and 2 were cases at *avizandum*. The amount of compensation awarded in the 136 cases in favor of plaintiff was a lump sum of £5,669 18s. 11d. (\$27,592.79) for 47 cases, and a total weekly payment of £47 5s. 8½d. (\$230.12) for 89 cases. There were 73 cases in which memoranda were registered in the sheriff courts; of these 70 were settled by agreement and 3 by agreed arbitrator. Lump sums aggregating £3,975 2s. 10d. (\$19,345.03) were awarded in 28 cases, and in 45 cases the awards were for a total weekly sum of £27 7s. 8d. (\$133.26).

Of the 139 cases under the employers' liability act coming before the sheriff courts during 1900, 6 were decided in favor of the plaintiff, 20 in favor of the defendant, 13 were removed to a higher court, and 100 were otherwise disposed of. Damages aggregating £322 (\$1,567) were awarded in the 6 cases in favor of plaintiff.

There were 32 cases of appeal to the court of session under the workmen's compensation act, 12 by workmen and 20 by employers, and 50 cases under the employers' liability act, 47 by workmen and 3 by employers.

In Ireland, of the 83 cases under the workmen's compensation act during 1900 coming before the county courts, 74 were decided by award of the judge, 1 by the acceptance of money paid into court, and 8 were otherwise disposed of. Of the 75 cases settled in court, 47 were for the plaintiff and 28 for the defendant. The amount of compensation awarded in the 47 cases in favor of plaintiff was a lump sum of £1,790 4s. 8d. (\$8,712.17) for 23 cases and a total weekly payment of £10 11d. (\$48.89) for 24 cases. There were 23 cases in which memoranda were registered, all of which were settled by agreement. Lump sums aggregating £500 (\$2,433.25) were awarded in 9 cases, and in 14 the awards were for a total weekly sum of £7 6s. 11d. (\$35.75).

Of the 19 cases under the employers' liability act coming before the county courts during 1900, 13 were decided in favor of the plaintiff, 3 in favor of the defendant, and 3 were otherwise disposed of. Damages aggregating £471 (\$2,292.12) were awarded in the 13 cases in favor of plaintiff.

There were 6 cases of appeal to the court of appeal under the workmen's compensation act, 5 by workmen and 1 by employers, and 6 cases to the high court of justice under the employers' liability act, all being by workmen.

The following table shows the number of cases in the United Kingdom coming before the county and sheriff courts under the workmen's compensation act, 1897, and the employers' liability act, 1880, during 1900, classified according to the nature of the employment of the persons concerned:

CASES DURING 1900 COMING BEFORE THE COUNTY AND SHERIFF COURTS UNDER THE WORKMEN'S COMPENSATION ACT, 1897, AND THE EMPLOYERS' LIABILITY ACT, 1880.

Nature of employment.	Cases under workmen's compensation act, 1897.				Cases under employers' liability act, 1880.			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
Railway	157	42	6	205	9	8	.....	17
Factory	764	119	51	934	260	64	2	326
Mine	271	59	6	336	8	7	.....	15
Quarry	43	2	2	47	1	2	1	4
Engineering work	166	45	7	218	41	13	11	65
Building	151	40	11	202	129	29	4	162
Other .....	.....	.....	.....	.....	63	16	1	80
Total	1,552	307	83	1,942	511	139	19	669

Since 1898, there has been a falling off in the number of cases under the employers' liability act as a result of the new rights given by the workmen's compensation act.

Ninth and Tenth Annual Reports on Changes in Rates of Wages and Hours of Labor in the United Kingdom, 1901 and 1902. lxxxv, 77 pp.; lxxxiv, 54 pp. (Published by the Labor Department of the British Board of Trade.)

These are the ninth and tenth of a series of annual reports dealing with the changes in the market rates of wages and recognized hours of labor of working people in the United Kingdom for a full week's work, exclusive of overtime. The changes of this character are shown in detailed tables and in summaries presenting the facts with regard to each trade and group of trades, classified in various ways. The reports also contain piece-price lists and sliding wage scales agreed upon in 1901 and 1902 and the principal amendments to those which were in operation before the beginning of each year. The changes recorded in the present reports are based upon returns from employees' and employers' associations, trade unions, local correspondents of the department, and official sources.

In 1901, the first time since 1895, a decline in wages was recorded. In 1896 an upward movement began which culminated in 1900, when the general level of wages stood higher than in any other year for which statistics exist. The decline in 1901 is accounted for mainly by the fall in miners' wages, the rise in which was the predominant feature of the statistics for the years 1898 to 1900. The fall in wages in this industry accounted for over 80 per cent of the total weekly decrease in 1901. A considerable decline also occurred in the metal trades, but in the remaining industries the net result for the year was a slight increase. The principal feature of the changes during 1902 was the fall in wages in the coal-mining industry. The reductions in this industry accounted for 95 per cent of the total decrease recorded. Reduc-

tions also took place in the shipbuilding trades. In the other groups of trades dealt with no important changes occurred during 1902, but the tendency of such as did take place was, on the whole, upward.

The tables following summarize the principal data contained in the returns for the years 1893 to 1902:

CHANGES IN RATES OF WAGES, AND EMPLOYEES AFFECTED, 1893 TO 1902.

Year.	Changes in rates of wages.	Separate individuals affected by—			Total individuals affected by changes in rates of wages.	Average weekly increase in rates of wages.
		Increases in rates of wages.	Decreases in rates of wages.	Changes leaving wages same at end as at beginning of year.		
1893.....	706	142,364	256,473	151,140	549,977	\$0.112
1894.....	779	175,615	489,357	6,414	670,386	a.330
1895.....	805	80,107	351,996	4,956	436,968	a.314
1896.....	1,607	382,225	167,357	58,072	607,654	.213
1897.....	1,518	560,707	13,856	22,882	567,444	.259
1898.....	1,406	1,009,290	11,965	14	1,015,169	.385
1899.....	1,593	1,174,444	1,132	92	1,175,576	.375
1900.....	1,418	1,112,684	23,010	92	1,135,786	.897
1901.....	969	429,715	492,518	9,883	832,126	a.406
1902.....	471	91,812	793,041	5,503	890,356	a.396

a Decrease.

CHANGES IN HOURS OF LABOR, AND EMPLOYEES AFFECTED, 1893 TO 1902.

Year.	Changes in hours of labor.	Separate individuals affected by—		Total individuals affected by changes in hours of labor.	Average weekly reduction in hours of labor.
		Increases in hours of labor.	Decreases in hours of labor.		
1893.....	155	1,530	33,119	34,649	1.99
1894.....	221	128	77,030	77,158	4.04
1895.....	141	1,287	21,448	22,735	1.94
1896.....	245	73,616	34,665	108,271	.73
1897.....	254	1,060	69,572	70,632	4.03
1898.....	202	1,277	37,772	39,049	2.10
1899.....	209	2,600	33,349	35,949	3.54
1900.....	158	869	56,857	57,726	4.12
1901.....	117	586	28,690	29,276	2.01
1902.....	92	5,524	1,061,983	1,067,507	.97

The data shown in the above tables, as well as in those immediately following, do not include returns relating to agricultural laborers, seamen, and railroad employees, which are separately treated in the report.

CHANGES IN RATES OF WAGES.—The 969 changes in rates of wages during 1901 affected a total of 932,126 working people, the net result being a reduction in the weekly wages bill amounting to £77,343 (\$376,390), or an average per head of 1s. 8d. (\$.406). During 1902 the 471 changes in rates of wages affected 890,356 working people, the net effect of all the changes being a decrease in weekly wages of £72,701 (\$353,799), or an average per head of 1s. 7½d. (\$.395).

The following table shows, by industries, the number of changes in the rates of wages in 1901 and 1902, and the number of employees affected:

CHANGES IN RATES OF WAGES AND EMPLOYEES AFFECTED, BY INDUSTRIES, 1901 AND 1902.

1901.

Industries.	Changes in rates of wages.	Separate individuals affected by—			Total individuals affected by changes in rates of wages.	Average weekly increase in rates of wages.
		Increases in rates of wages.	Decreases in rates of wages.	Changes leaving wages same at end as at beginning of year.		
Building	158	29,598	10,089	.....	39,687	\$0.238
Mining and quarrying	153	325,249	392,023	8,478	725,750	a. 421
Metal engineering, and shipbuilding	264	14,467	87,469	1,280	103,216	a. 994
Textile	82	2,911	187	.....	3,098	.456
Clothing	39	5,265	9	135	5,409	.624
Miscellaneous	136	24,610	2,728	.....	27,338	.294
Employees of public authorities	187	27,613	13	.....	27,626	.324
Total	969	429,715	492,518	9,893	932,126	a. 406

1902.

Building	72	12,401	3,089	85	15,575	\$0.289
Mining and quarrying	96	12,388	736,990	.....	749,378	a. 476
Metal engineering, and shipbuilding	139	46,529	49,725	5,418	101,672	a. 076
Textile	22	2,086	21	.....	2,107	.330
Clothing	23	2,612	500	.....	3,112	.456
Miscellaneous	47	7,925	2,716	.....	10,641	.091
Employees of public authorities	72	7,871	.....	.....	7,871	.370
Total	471	91,812	793,041	5,503	890,356	a. 395

a Decrease.

The net results of these changes in rates of wages during a period of ten years are shown, by industries, in the following table:

AVERAGE INCREASE IN RATES OF WAGES, BY INDUSTRIES, 1893 TO 1902.

Industries.	Average increase per employee per week.									
	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Building	\$0.360	\$0.345	\$0.411	\$0.502	\$0.517	\$0.502	\$0.487	\$0.411	\$0.238	\$0.249
Mining and quarrying	.228	a. 421	a. 461	a. 127	.132	.416	.395	1.161	a. 421	a. 476
Metal engineering, and shipbuilding	a. 218	a. 157	.005	.370	.269	.279	.634	.831	a. 994	a. 076
Textile	a. 086	.112	.046	.020	.041	a. 086	.122	.233	.456	.330
Clothing	.395	.335	.471	.314	.476	.091	.274	.527	.624	.456
Miscellaneous	a. 020	a. 076	a. 127	.416	.507	.390	.390	.456	.294	.091
Employees of public authorities	.390	.360	.390	.294	.350	.345	.284	.395	.324	.370
Total	.112	a. 330	a. 314	.213	.259	.385	.375	.897	a. 406	a. 395

a Decrease.

The groups of building trades, clothing, and employees of public authorities are the only ones that show an unbroken succession of net increases in rates of wages for each year of the period. The groups showing the greatest number of decreases during the period are

mining and quarrying and metal, engineering, and shipbuilding. Considering the net results for all the industries, four years out of the period show an average decrease in wages per employee per week, namely, 1894 and 1895, and 1901 and 1902.

The groups of agricultural laborers, railway employees, and seamen have been separately considered in the reports, owing to the difficulty in obtaining returns of the precise number of persons affected by changes in wage rates in these industries.

Information regarding the wages of agricultural laborers in England and Wales was obtained mainly from the chairmen of rural district councils. In the reports the current rates of weekly cash wages in January and June of 1901 and 1902 are compared with those returned for corresponding dates in each year preceding. The returns received were exclusive of piecework earnings and extra payments and allowances of any kind. Figures presented for a series of years show that the net result has been an improvement in the rates of wages of agricultural laborers for each year since 1896. The number of laborers in districts in which wages were reported to have changed in 1901 was 172,542, as compared with 281,262 in 1900. Of the 172,542 laborers affected in 1901, the wages in districts containing 159,456 were increased, and in the case of 13,086, wages were reduced. In 1900 no reductions were reported. The number of laborers in districts in which wages were reported to have changed in 1902 was 120,069. Of this total, the wages in districts containing 66,601 were increased, and in the case of 53,468, wages were reduced. The net result of these changes was an increase of £3,952 (\$19,232) per week in 1901 and of £400 (\$1,947) in 1902. The returns for Scotland were based on information obtained from hiring fairs, and also from a number of representative employers. At the hiring fairs held in 1901 the increased rates of wages obtained the previous year were generally well maintained, and for 1902 the reports show that wages remained practically stationary. Reports from Ireland show that, although there had been no general movement in the wages of farm laborers during 1901 and 1902, a few districts showed a slight upward tendency.

The rates of wages of seamen were based upon returns furnished by superintendents of the mercantile marine in the various ports of the Kingdom. The average monthly wages on steamships of able seamen were, in 1901, 82s. 6d. (\$20.07), and in 1902, 81s. 2d. (\$19.75), a decrease per month of 1s. 4d. (\$0.32); the average monthly wages of firemen and trimmers were, in 1901, 87s. 2d. (\$21.21), and in 1902, 85s. 10d. (\$20.89), a decrease per month of 1s 4d. (\$0.32). The average monthly wages of able seamen on sailing vessels were, in 1901, 60s. 5d. (\$14.70), and in 1902, 60s. 1d. (\$14.62), a decrease per month of 4d. (\$0.08). Food is given in addition to these wages.

In determining the wages of railway employees a different method has been followed from that adopted for other groups of trades, the actual earnings being considered instead of the wage rates, because in the British railway service the remuneration is usually regulated by graduated scales of pay rather than by fixed wage rates. It is intended to indicate the total effect of all changes in the earnings of railway employees, whether arising out of real changes in the scale of pay, ordinary advances under existing scales, or overtime or short time. Returns are published from 27 companies, employing together over 90 per cent of the railway employees in the United Kingdom. The returns summarized in the following table cover the number of employees and the average earnings for the first week in December of each year from 1896 to 1902 in the passenger, freight, locomotive, and machinery construction departments:

AVERAGE EARNINGS OF RAILWAY EMPLOYEES IN 27 COMPANIES, FIRST WEEK IN DECEMBER, 1896 TO 1902.

Year.	Total employees.	Total wages.	Average earnings.
1896.....	380, 114	\$2, 220, 978. 27	\$5. 84
1897.....	398, 108	2, 362, 539. 76	5. 94
1898.....	412, 804	2, 471, 753. 75	6. 00
1899.....	431, 858	2, 653, 556. 46	6. 14
1900.....	440, 847	2, 686, 025. 74	6. 10
1901.....	440, 557	2, 681, 996. 28	6. 09
1902.....	448, 429	2, 721, 244. 60	6. 07

Comparing averages the table shows that in the first week of December for the last three years the average earnings of the railway employees included in the returns were practically the same. Caution, however, is necessary in drawing inferences from these comparisons as regards general changes in the average weekly rates of pay, since the returns are a statement of earnings, not of rates of wages, and would be affected by changes (in the amount of overtime worked, for example) independently of any variation in weekly rates.

CHANGES IN HOURS OF LABOR.—The changes in hours of labor recorded in 1901 and in 1902 resulted, as in previous years, in a net reduction.

The number of working people whose weekly hours of labor were shortened during 1902 was 1,057,507, by far the greatest recorded since these statistics were first collected in 1893. This is due to the change in the weekly hours of those employed in textile factories and in printing, bleaching, and dyeing works. In these industries the maximum number of hours during which women, young persons, and children may be employed is now regulated by act of Parliament, and at the beginning of 1902 the working time on Saturdays was reduced by 1 hour, making the maximum weekly hours 55½. The hours of men employed in these industries are not regulated by the act, but in the

majority of cases they were reduced at the same time. In all, over 1,000,000 working people in the textile trades had their weekly hours of labor reduced, either directly or indirectly, by the act.

The following table shows, by industries, the number of changes in the hours of labor and the number of employees affected during the year 1902:

CHANGES IN HOURS OF LABOR AND EMPLOYEES AFFECTED, BY INDUSTRIES, 1902.

Industries.	Changes in hours of labor.	Separate individuals affected by—		Total individuals affected by changes in hours of labor.	Average weekly reduction in hours of labor.
		Increases in hours of labor.	Decreases in hours of labor.		
Building	45	5,500	9,140	14,640	0.20
Mining and quarrying	4	.....	566	566	8.90
Metal, engineering, and shipbuilding	7	24	472	496	5.87
Textile	2	.....	1,037,000	1,037,000	.96
Clothing	2	.....	755	755	2.17
Miscellaneous	27	.....	3,701	3,701	3.30
Employees of public authorities	6	.....	349	349	7.51
Total	92	5,524	1,061,983	1,067,507	.97

^aThe sum of the items does not agree with this total. The figures, however, are reproduced as they appear in the original.

METHODS OF ARRANGEMENT OF CHANGES.—The changes in the rates of wages and hours of labor reported in 1901 and 1902 were arranged by mutual agreement of the parties concerned or otherwise, by conciliation or mediation, by arbitration, and (in the case of wage changes only) by the sliding wage scales.

The following table shows the number of persons affected by changes in wages and hours of labor during each year from 1896 to 1902, classified according to the agencies by which the changes were arranged:

METHOD BY WHICH CHANGES IN WAGES AND HOURS OF LABOR WERE ARRANGED, 1896 TO 1902.

Year.	Separate individuals affected by changes arranged without strikes.					Separate individuals affected by changes arranged after strikes.			
	Under sliding scale.	By conciliation or mediation.	By arbitration.	By mutual arrangement or otherwise.	Total.	By conciliation or mediation.	By arbitration.	By mutual arrangement or otherwise.	Total.
CHANGES IN WAGES.									
1896	136,298	43,601	4,920	360,075	544,894	11,559	174	51,037	62,770
1897	135,618	11,796	807	405,492	558,213	1,400	1,959	40,812	44,231
1898	169,003	25,659	3,850	764,622	963,134	1,015	2,050	48,970	52,035
1899	178,018	364,616	11,636	567,038	1,141,308	1,581	1,452	31,240	34,273
1900	183,889	469,520	5,827	421,590	1,080,826	1,030	3,780	50,150	54,960
1901	191,205	502,000	11,508	212,800	917,573	180	667	13,705	14,553
1902	172,988	536,959	2,600	165,010	877,557	136	1,457	11,206	12,799
CHANGES IN HOURS.									
1896 .....	.....	300	1,500	85,474	87,274	2,758	.....	18,239	20,997
1897 .....	.....	1,200	712	62,404	64,316	46	36	6,234	6,316
1898 .....	.....	4,427	3,570	26,668	34,590	450	2,050	1,959	4,459
1899 .....	.....	65	1,100	28,534	29,699	100	34	6,116	6,250
1900 .....	.....	1,440	628	52,574	54,640	.....	285	2,801	3,086
1901 .....	.....	450	13,195	12,880	26,505	9	53	2,709	2,771
1902 .....	.....	3,330	.....	1,051,624	1,054,954	130	860	1,668	2,558

The number of separate individuals affected by changes of wages in 1902 which were preceded by strikes causing stoppage of work was even lower than in 1901, hitherto the lowest recorded. On the other hand, changes affecting 80 per cent of the working people were arranged by conciliation, arbitration, wages boards, sliding scales, or other conciliatory agencies. This large percentage is due to the fact that the changes in the coal and iron industries, in which the most widespread changes of wages occurred in 1902, are now usually arranged by such methods.

With regard to changes in hours of labor in 1902 the statistics are entirely dominated by the figures relating to the large number of operatives employed in the textile industries, in which the working hours on Saturdays were reduced in consequence of an act of Parliament which came into operation at the beginning of the year.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

ALIEN CONTRACT LABOR—PROMISE OF EMPLOYMENT—CONSTRUCTION OF STATUTE.—*United States v. Baltic Mills Company, United States Circuit Court of Appeals, Second Circuit, 124 Federal Reporter, page 38.*—In this case the Government sought to recover a penalty from the Baltic Mills Company for violation of what is known as the alien contract labor law of 1885, the principal clause relied on being an amendatory act passed March 3, 1891, which provides that it shall be deemed a violation of said act to assist or encourage the importation or immigration of any alien by promise of employment through advertisements printed or published in any foreign country. An exception is made as to States and immigration bureaus thereof advertising the inducements they offer for migration to such States. The Baltic Mills Company is a Connecticut corporation and had published in the Cotton Factory Times, a newspaper of the city of Manchester, England, the following advertisement:

“Wanted—First-class weavers on fine comb work, in one of the most beautiful villages in Connecticut, U. S. A. First-class weavers can earn per week 35s. to £2. Families preferred. Reasonable rents in six-room cottages on line of railroad and electric cars. This is a new mill starting up. None but first-class weavers and respectable people need apply. Baltic Mills Company, H. Lawton, Manager, Baltic, Conn., U. S. A.”

It is alleged that one Hargrave, a resident of the vicinity of Manchester, read this advertisement and in consequence thereof came to the United States and entered the service of the advertising company. The case was first heard in the United States district court for the district of Connecticut, at which hearing it was demurred to the complaint that it did not appear that the advertisement contained any promise of employment or was in violation of the provisions of said act. This demurrer was sustained by the court, and the case ordered dismissed. An appeal was taken to the circuit court of appeals and the opinion of

the district court was reversed, Judge Coxe dissenting. From the opinion of Judge Wallace, who delivered the judgment of the court, the following is quoted:

In legal definition a promise is a declaration, verbal or written, made by one person to another, for a good or valuable consideration, by which the promisor binds himself to do or forbear some act, and gives to the promisee a legal right to demand and enforce fulfillment. (*Newcomb v. Clark*, 1 Denio, 226-228.) In a general sense, it is a declaration "which binds the person who makes it, either in honor, conscience, or law, to do or forbear a certain act specified." One definition, according to Worcester, is "assurance of a benefit." The meaning of the term as used in the statute is not necessarily its meaning in legal definition. The rule that penal statutes are to be strictly construed is not violated by allowing their words to have full meaning, or even the more extended of two meanings, where such construction best harmonizes with the context.

The advertisement in question was an assurance to first-class weavers that they could find employment at their trade with the defendant which would yield a stated return varying between specified rates; but it was not equivalent to a contract to employ such as might apply, or to employ them for any definite period. A proposal addressed to some person in particular becomes a contract, if its terms are accepted by the promisee before it is withdrawn; but one addressed to the world at large does not become a contract until some one of those to whom it is addressed has performed its conditions. The employee whose services have been accepted by the employer pursuant to such a proposal may rely upon the terms of the proposal as to wages and other conditions expressed; but the promisee has no right of action for breach of the contract, express or implied, from the refusal of the promisor to employ him. The newspapers teem with advertisements for employees of all kinds, many of which specify the wages and other conditions of the service expected; but it has never been supposed that the person who offers himself for the employment, by the inducement of the advertisement, and is refused, can maintain suit for a breach of contract. The privilege of the advertiser to exercise his personal judgment as to the character and habits, and other qualifications generally, of the applicant, is an implied condition of his proposal, and no contract arises consequently until the applicant has been accepted.

It was the obvious purpose of the amendatory act to remedy the defects in the preexisting statute in two particulars. Under the preexisting statute the penalty did not accrue unless (1) the alien had previous to his migration entered into a contract to perform labor or service in this country, and (2) had actually migrated here, and (3) the defendant had, by prepayment of transportation or otherwise, encouraged or assisted his migration, knowing that such a contract had been entered into.

The amendment was intended to dispense with the necessity of proving that there had been a contract with the alien "made previous to the importation or migration," or that there had been any other assistance or encouragement to his migration than a promise of employment. It adds to the acts penalized by the former statute another, and makes it penal to "assist or encourage" the migration "by promise of

employment through advertisement." The word "promise" is used in the sense in which advertisements commonly promise employment to applicants. Under the former statute there could be no antecedent contract by an advertisement, however explicit the terms of the promise might be, because the promise could not, until the alien entered upon its performance, become a contract. Under the present no antecedent contract is necessary, and it would seem to suffice if there is a promise of employment sufficiently explicit to induce those to whom it is addressed to apply to some particular employer in the expectation of receiving employment of a specified kind at specified compensation. The proviso indicates that Congress did not use the word "promise" in its strict legal meaning, but rather in the sense of an assurance or inducement to encourage aliens to migrate. The proviso withdraws from the operation of the section the "inducements advertised by States and immigration bureaus of States offered for immigration to such States." These advertisements do not ordinarily contain promises of employment in the nature of specific proposals, but contain assurances of opportunity for employment and of the remuneration that may be expected. The office of a proviso is to carve an exemption out of the enacting clause, to except something which would otherwise have been within it (*Wayman v. Southard*, 10 Wheat. 30, 6 L. Ed. 253; *Minis v. United States*, 15 Pet. 423, 10 L. Ed. 791); and this proviso denotes the intention of Congress to exempt States and their immigration bureaus from a liability which might otherwise be incurred by the advertisement of their inducements to immigrants. We are of opinion that any assurance of probable employment, definite as to the kind, the place, and the rate of wages, is a promise of employment within the meaning of the statute. If this conclusion is correct, the advertisement published by the defendant was within the interdicted class. Obviously both the defendant and the alien regarded the advertisement as holding out a promise of employment specific enough to induce the alien to migrate and accomplish the purpose intended by the defendant.

The question which was presented by the demurrer is not altogether free from doubt, especially in view of the very strict construction which the courts have placed upon the alien contract labor law; but we are constrained to the conclusion that the complaint was sufficient.

The judgment is reversed, with instructions to the court below to order judgment for the plaintiff, but without prejudice to an application by the defendant for leave to answer.

Justice Coxe, dissenting, spoke in part as follows:

Two propositions are, in my judgment, established beyond controversy: First, in order to bring the defendant in error within the statute, there must be proof that it assisted or encouraged the migration of Hargrave "by promise of employment," and, second, the advertisement in question contains no such promise.

There is no ambiguity in the statute. Its meaning is plain. There is, therefore, no necessity for resorting to extrinsic considerations or contemporaneous debate to arrive at its proper construction. The plaintiff in error seeks an interpretation which eliminates the words "by promise of employment" altogether, or he seeks to accomplish the same result by making the word "promise" synonymous with "expectation" or "hope." The word has never been so construed when used in legal documents or statutes. It means an "engagement,"

"undertaking," "assurance," "obligation" or "agreement." If not actually a contract it implies a declaration which becomes such when accepted by the person to whom it is addressed. Had the advertisement in question contained such a promise the migration of Hargrave pursuant thereto would probably be deemed an acceptance. The advertisement contains no promise of any kind. It is hardly more than a statement of facts and conditions existing at the Baltic Mills. The newspaper press teems with similar "want" advertisements. It can not be seriously contended that one who advertises for a coachman or a cook has made a "promise of employment." On the contrary, he is at liberty to reject, arbitrarily, all applicants.

It was admitted at the argument by the learned district attorney that the Baltic Mills Company was under no legal obligation to employ emigrants coming here from Manchester. They could have turned all alien applicants from their mills without a word of explanation, and there would have been no redress.

CONTRACTS OF EMPLOYMENT—ENFORCEMENT—PEONAGE—CONSTITUTIONALITY OF STATUTE—*Peonage Cases, United States District Court for the Middle District of Alabama, 123 Federal Reporter, page 671.*—This opinion was delivered by District Judge Jones in response to questions propounded by the grand jury relative to peonage and involuntary servitude in the State of Alabama. The discussion is quite lengthy and involves a consideration of the historical reasons as well as the legal principles on which the Federal statute prohibiting peonage (Rev. Stat., sec. 5526, U. S. compiled Stat., 1901, p. 3715) is based. The discussion also involves a consideration of the constitutionality of the Alabama law regulating labor contracts, passed March 1, 1901, act No. 483, acts of 1900–1901.

From Judge Jones's summary the following is quoted as being of general interest:

1. A person who hires another, and induces him to sign a contract by which he agrees during the term to be imprisoned or kept under guard, and under cover of such agreement afterwards holds the party to the performance of the contract by threats or punishment, or undue influence, subduing his free will, when he desires to abandon the service, is guilty of holding such a person to "a condition of peonage."

5. If a defendant, convicted of a misdemeanor, signs in open court a written contract, approved in writing by the judge, in consideration of another becoming his surety on confession of judgment for the fine and costs, and is thereupon released, the law of the State treats him as a convict who has resigned himself to the custody of his surety to escape that of the State, and the surety may restrain him of his liberty, and invoke the aid of the State law to compel the service. This provision applies only to cases in which there has been a lawful conviction, and a written contract, signed in open court, approved in writing by the judge. The contract can not extend beyond securing the fine and costs while they are being worked out. It can not be made, as has been repeatedly declared by the supreme court of this State, the basis

of a contract for additional service on payment of advances, and the convicted person can not be held in involuntary servitude for their payment.

6. Although one may have confessed judgment for another on his conviction, the surety is not entitled on that account to detain him in custody against his will, as his bail would be before trial, unless the surety has complied with the statutes of the State, and made written contract in open court, approved by the judge in writing. This is a safeguard which the State exacts to prevent abuse and oppression when the surety intends to hold his principal to involuntary service to reimburse him for the payment of the fine and costs. As such an agreement involves personal trust and confidence on the part of the convict in the selection of a keeper, his surety has no authority, without his consent, to transfer the contract and custody of the convict to some other person, who repays to the surety the fine and costs, and enforces the performance of the service. If there is no written contract approved by the court, or if it is transferred without the consent of the convict, the convict can not be held against his will to perform service to repay his fine and costs. If one holds another convicted of a misdemeanor, against his will, because he has confessed judgment for the fine and costs, without obtaining a written contract in open court, approved in writing by the judge, or holds him against his will, after the fine and costs have been worked out, for advances upon a further term of service, or prevents his leaving by force or threats as above defined, such person is guilty of holding the person in a condition of peonage.

9. The act of the legislature of Alabama, approved March 1, 1901 (acts 1900-1901, p. 1208, sec. 1), about which you inquire, makes it a penal offense, where a person, who has "contracted in writing to labor for or serve another for any given time, or any person who has by written contract leased or rented land from another for any specified time, or any person who has contracted in writing with the party furnishing lands, or the lands and teams to cultivate it, either to furnish the labor, or the labor and teams, to cultivate the lands," afterwards, without the consent of the other party, and without sufficient excuse, to be adjudged by the court, "shall leave such other party or abandon said contract, or leave or abandon the leased premises or land as aforesaid," and take employment of a similar nature from another person, without first giving him notice of the prior contract.

Under the statute, the laborer or renter has done no criminal act in leaving or in abandoning the contract or premises. The act does not make the leaving an offense. All that amounts to, under this statute, is a breach of a civil contract. That creates only the relation of debtor and creditor. The statute, on the foundation, for the reason, that the relation of creditor and debtor results from the breach of the contract, commands the debtor, on peril of hard labor, not to work at his accustomed vocation for anyone else, during the term of the contract, without the permission of the creditor, unless he informs his new employer of the first contract. Another statute, providing for this very contingency, declares, if the laborer or renter does inform the person of whom he seeks employment, the latter shall incur heavy pains and penalties if he employs him without the first employer's permission.

What is this but declaring, if a man breaks his contract with his creditor without just excuse, he shall not work at his accustomed voca-

tion for others without permission of the creditor? What is this but a coercive weapon placed by the law in the hands of the employer to compel the debtor to pay a debt, to perform the contract? Under the constitution of Alabama there can be no imprisonment for debt, nor can it be treated, directly or indirectly, as a crime. The only constitutional method of enforcing a contract for personal service is to get judgment and execution, and have compensation for the broken contract by seizure and sale of the defendant's property.

The whole scheme and purpose and the inevitable effect of these statutes are to coerce the laborer or renter to pay a debt, return to a personal service, by stress of penal enactments leveled at his person in the one instance, and against his right to work in the other. No man can be lawfully compelled to disclose differences with former employers, or breaches of contract with others, as a condition precedent to the right lawfully to engage in the service of another, in order to coerce him to pay a debt or perform a contract of personal service. The debtor can not be compelled to put himself upon the blacklist that he may be prevented from getting work without an employer's consent, in order to coerce him to the performance of a contract of personal service or the payment of a debt. All such legislation is plainly violative of our State constitution.

Certain counties of the State are exempt from any application of this law, and the court held that the act was repugnant to the constitution of the State as creating both local and class distinctions. The concluding paragraph refers to its relation to the Constitution of the United States, as follows:

A person convicted and put to hard labor for violating the provisions of this statute, because he did not give notice of the first employment before entering upon the second, is restrained of his liberty in violation of the Constitution of the United States, and is entitled to discharge on habeas corpus, notwithstanding he is held under a final judgment of a State court which remains unappealed and unreversed. (Ex parte Royall, 117 U. S., 241; 6 Sup. Ct., 734; 29 L. Ed., 868.) The act is plainly violative of the thirteenth amendment to the Constitution, and the statute passed, in pursuance thereof, against peonage. It establishes a system of peonage, and uses the arm of the law to keep persons in "a condition of peonage," whenever they "abandon the leased premises," by coercing performance of the "obligation" of contracts of "labor or service" by involuntary service.

EIGHT-HOUR LAW—MUNICIPAL CORPORATIONS—CONSTITUTIONALITY OF STATUTE—*Atkin v. State, United States Supreme Court, No. 30, October Term, 1903.*—This was an appeal by W. W. Atkin from a judgment by the supreme court of Kansas (see Bulletin of the Department of Labor, No. 40, p. 604), declaring the application to this case of what is known as the "Eight-hour law" of Kansas, and affirming the judgment of the district court of Wyandotte County, assessing a penalty on Atkin for a violation of said law.

This act was passed in 1891, and its first two sections read as follows:

SECTION 1. Eight hours shall constitute a day's work for all laborers, workmen, mechanics, or other persons now employed, or who may hereafter be employed by or on behalf of the State of Kansas, or by or on behalf of any county, city, township or other municipality of said State, except in cases of extraordinary emergency which may arise in time of war or in cases where it may be necessary to work more than eight hours per calendar day for the protection of property or human life: *Provided*, That in all such cases the laborers, workmen, mechanics or other persons so employed and working to exceed eight hours per calendar day shall be paid on the basis of eight hours constituting a day's work: *Provided further*, That not less than the current rate of per diem wages in the locality where the work is performed shall be paid to laborers, workmen, mechanics and other persons so employed by or on behalf of the State of Kansas, or any county, city, township or other municipality of said State; and laborers, workmen, mechanics, and other persons employed by contractors or subcontractors in the execution of any contract or contracts within the State of Kansas, or within any county, city, township or other municipality thereof shall be deemed to be employed by or on behalf of the State of Kansas or of such county, city, township or other municipality thereof.

SEC. 2. All contracts hereafter made by or on behalf of the State of Kansas, or by or on behalf of any county, city, township or other municipality of said State, with any corporation, person or persons, for the performance of any work or the furnishing of any material manufactured within the State of Kansas, shall be deemed and considered as made upon the basis of eight hours constituting a day's work; and it shall be unlawful for any such corporation, person or persons to require or permit any laborer, workman, mechanic or other person to work more than eight hours per calendar day in doing such work or in furnishing or manufacturing such material, except in the cases and upon the conditions provided in section 1 of this act.

The third section makes any officer of Kansas, or of any county, city, township, or municipality of that State, or any person acting under or for such officer, or any contractor with the State, or any county, city, township, or other municipality thereof, or other person violating any of the provisions of this act, liable for each offense, and subject to be punished by a fine of not less than \$50 nor more than \$1,000, or by imprisonment not more than six months, or by both fine and imprisonment, in the discretion of the court.

The constitutionality of this law had been affirmed by the supreme court of Kansas in the case *In re Dalton*, 59 Pac., 336 (see Bulletin of the Department of Labor, No. 28, p. 610), and this phase of the question was not considered by that court in its discussion of this case. The appeal was based, however, on the claim that the law was unconstitutional in that it deprived the appellant, Atkin, of his liberty and property without due process of law, and denied him the equal protection of the laws.

The following facts appear in an agreed statement: That Atkin had contracted with the municipal corporation of Kansas City, Kans., to do the labor and furnish the materials for paving Quindaro boulevard, a public street of that city; that he employed, among others, one George Reese to perform labor in that connection; that he permitted Reese to labor more than eight hours on each calendar day although there was no emergency or necessity requiring the same; that the agreement with Reese was that he should receive 15 cents per hour and no more, the current rate of wages for such work in that locality being \$1.50 for ten hours' labor per day; that Atkin required of Reese that he work ten hours per day in order to be entitled to the current rate of wages of \$1.50; that Reese was neither compelled nor requested to work more than eight hours per day, but did so voluntarily and was permitted and allowed to work ten hours in each calendar day in order to earn \$1.50 in such day; that the labor in which Reese was engaged was neither hazardous nor unhealthful and could be performed for a period of ten hours each working day without injury, and was in all respects the same, whether done for a municipality, or for a private person, or corporation; that Reese had solicited employment, and that neither he nor Atkin intended or expected that the former should receive the same compensation for eight hours' work as was paid customarily for ten hours' work; that the employment was without the knowledge or consent of the city, Reese being the servant of Atkin and not of the city; and that the contract between Atkin and the city did not contain any provision as to the number of hours laborers should work nor as to their compensation.

The constitutionality of the law was affirmed, Chief Justice Fuller and Justices Brewer and Peckham dissenting. From the remarks of Justice Harlan, who delivered the opinion of the court, the following is quoted:

The case has been stated quite fully, in order that there may be no dispute as to what is involved and what not involved in its determination. * * * Assuming that the statute has application only to labor or work performed by or on behalf of the State, or by or on behalf of a municipal corporation, the defendant [Atkin] contends that it is in conflict with the fourteenth amendment. He insists that the amendment guarantees to him the right to pursue any lawful calling, and to enter into all contracts that are proper, necessary or essential to the prosecution of such calling; and that the statute of Kansas unreasonably interferes with the exercise of that right, thereby denying to him the equal protection of the laws.

"If a statute," counsel [for defendant] observes, "such as the one under consideration is justifiable, should it not apply to all persons and to all vocations whatsoever? Why should such a law be limited to contractors with the State and its municipalities? Why should the law allow a contractor to agree with a laborer to shovel dirt for ten hours a day in performance of a private contract, and make exactly the same act under similar conditions a misdemeanor when done in the

performance of a contract for the construction of a public improvement? Why is the liberty with reference to contracting restricted in the one case and not in the other?"

These questions—indeed, the entire argument of defendant's counsel—seem to attach too little consequence to the relation existing between a State and its municipal corporations. Such corporations are the creatures, mere political subdivisions, of the State for the purpose of exercising a part of its powers. They may exert only such powers as are expressly granted to them, or such as may be necessarily implied from those granted. What they lawfully do of a public character is done under the sanction of the State. They are, in every essential sense, only auxiliaries of the State for the purposes of local government. They may be created, or, having been created, their powers may be restricted or enlarged, or altogether withdrawn at the will of the legislature; the authority of the legislature, when restricting or withdrawing such powers, being subject only to the fundamental condition that the collective and individual rights of the people of the municipality shall not thereby be destroyed. [Cases cited.] In the case last cited [Williams v. Eggleston, 170 U. S. 304, 310] we said that "a municipal corporation is, so far as its purely municipal relations are concerned, simply an agency of the State for conducting the affairs of government, and as such it is subject to the control of the legislature." * * *

The improvement of the boulevard in question was a work of which the State, if it had deemed it proper to do so, could have taken immediate charge by its own agents; for, it is one of the functions of government to provide public highways for the convenience and comfort of the people. Instead of undertaking that work directly, the State invested one of its governmental agencies with power to care for it. Whether done by the State directly or by one of its instrumentalities, the work was of a public, not private, character.

If, then, the work upon which the defendant employed Reese was of a public character, it necessarily follows that the statute in question, in its application to those undertaking work for or on behalf of a municipal corporation of the State, does not infringe the personal liberty of anyone. * * * Whatever may have been the motives controlling the enactment of the statute in question, we can imagine no possible ground to dispute the power of the State to declare that no one undertaking work *for it or for one of its municipal agencies*, should permit or require an employee on such work to labor in excess of eight hours each day, and to inflict punishment upon those who are embraced by such regulations and yet disregard them. It can not be deemed a part of the liberty of any contractor that *he* be allowed to do public work in any mode he may choose to adopt, without regard to the wishes of the State. On the contrary, it belongs to the State, as the guardian and trustee for its people, and having control of its affairs, to prescribe the conditions upon which it will permit public work to be done on its behalf, or on behalf of its municipalities. No court has authority to review its action in that respect. Regulations on this subject suggest only considerations of public policy. And with such considerations the courts have no concern.

If it be contended to be the right of everyone to dispose of his labor upon such terms as he deems best—as undoubtedly it is—and that to make it a criminal offense for a contractor for public work to

permit or require his employee to perform labor upon that work in excess of eight hours each day, is in derogation of the liberty both of employees and employer, it is sufficient to answer that no employee is entitled, of absolute right and as a part of his liberty, to perform labor for the State; and no contractor for public work can excuse a violation of his agreement with the State by doing that which the statute under which he proceeds distinctly and lawfully forbids him to do.

So, also, if it be said that a statute like the one before us is mischievous in its tendencies, the answer is that the responsibility therefor rests upon legislators, not upon the courts. No evils arising from such legislation could be more far-reaching than those that might come to our system of government if the judiciary, abandoning the sphere assigned to it by the fundamental law, should enter the domain of legislation, and upon grounds merely of justice or reason or wisdom annul statutes that had received the sanction of the people's representatives. We are reminded by counsel that it is the solemn duty of the courts in cases before them to guard the constitutional rights of the citizen against merely arbitrary power. That is unquestionably true. But it is equally true—indeed, the public interests imperatively demand—that legislative enactments should be recognized and enforced by the courts as embodying the will of the people, unless they are plainly and palpably, beyond all question, in violation of the fundamental law of the Constitution. It can not be affirmed of the statute of Kansas that it is plainly inconsistent with that instrument; indeed its constitutionality is beyond all question.

Equally without any foundation upon which to rest is the proposition that the Kansas statute denied to the defendant or to his employee the equal protection of the laws. The rule of conduct prescribed by it applies alike to all who contract to do work on behalf either of the State or of its municipal subdivisions, and alike to all employed to perform labor on such work.

Some stress is laid on the fact, stipulated by the parties for the purposes of this case, that the work performed by defendant's employee is not dangerous to life, limb or health, and that daily labor on it for ten hours would not be injurious to him in any way. In the view we take of this case, such considerations are not controlling. We rest our decision upon the broad ground that the work being of a public character, absolutely under the control of the State and its municipal agents acting by its authority, it is for the State to prescribe the conditions under which it will permit work of that kind to be done. Its action touching such a matter is final so long as it does not, by its regulations, infringe the personal rights of others; and that has not been done.

EIGHT-HOUR LAW—POLICE POWER—CONSTITUTIONALITY OF STATUTE—*People v. Orange County Road Construction Company, Court of Appeals of New York, 67 Northeastern Reporter, page 129.*—This case came before the court of appeals on appeal from the appellate division of the supreme court. The case was originally heard in the county court for Orange County. The Orange County Road Construction Company was indicted for a violation of the eight-hour law, it being

at the time a contractor with the county of Orange for the improvement of a public highway. It was charged that certain of its employees had been required to work more than eight hours for a day's labor. The company demurred to the indictment, claiming that no crime was charged because the section of the code quoted was unconstitutional and void. The county court sustained the demurrer, whereupon the case was taken to the appellate division, which reversed the judgment of the court below and held the indictment good. The company then made this appeal, with the result that the law was declared unconstitutional by a divided bench. Judge Cullen, with whom three members of the court concurred, said in part:

It seems to me to be entirely clear that the statute can not be upheld as an exercise of the police power vested in the legislature. I should think the proposition too plain for debate. But if this assertion be considered dogmatic, then I say that the question is settled by the decision both of this court and the Supreme Court of the United States. While the field for the exercise of the police power, subject to which all property is possessed by the citizen, and all his callings or vocations must be pursued, is very broad—so broad that no court has sought to define accurately its extent—still it is subject to recognized limitations. In the interest of public health, of public morals, and of public order, a State may restrain and forbid what would otherwise be the right of a private citizen. It may enact laws to regulate the extent of the labor which women and children or persons of immature years shall be allowed to perform, and prohibit altogether their employment in dangerous occupations. (*Commonwealth v. Hamilton Manufacturing Co.*, 120 Mass., 383; *Tiedeman's Police Power*, sec. 85.) It may limit the hours of employment of adults in unhealthy work (*Holden v. Hardy*, 169 U. S., 366; 18 Sup. Ct., 383; 42 L. Ed., 780), and it may be that it could prohibit the performance of excessive physical labor in all callings. But while it is generally for the legislature to determine what laws and regulations are needed to protect the public health and serve the public comfort and safety, such measures must have some relation to these ends. The statute now before us does not deal with the character of the work, the age, sex, or condition of the employees, nor even the personality of the employer, but applies only to the case of a contract with the State or a municipality. What possible bearing on the health or security of the employees or on public health has the fact that the employer is executing a contract for the construction or performance of a State or municipal work? The defendant might be constructing in the next town a road for a turnpike company or for its own use. In this work it could require labor for as many hours a day as it saw fit, and could get workmen to perform. Yet the same action, involving exactly the same character of work, when done in performance of a contract with the public, is by this statute made criminal. If we assume that a general statute forbidding in all cases the performance of physical labor for more than eight hours out of the twenty-four would be constitutional, that concession would not sustain the validity of the act before us. The vice of the statute is the arbitrary distinction drawn between persons contracting with the State and other employers.

It is urged that the work is a State work, and that the legislature may prescribe rules for the manner in which it is to be performed. As a general proposition, this is doubtless true. The State may prescribe regulations for the conduct of its employees. Those employees must comply with the mandate of the legislature. If, in the case of a private person, his foreman or manager should, in intentional violation of the master's command, exact more than eight hours' work a day from the men working under him, the master might discharge him, even though his contract of employment was for a definite term. In the case of the State, the employer being not only master, but sovereign, it may be that it could go further, and make the violation of its mandates criminal. This statute, however, does not deal with employees—at least not exclusively with them. The section reads: "Any person or corporation who, contracting with the State or a municipal corporation, shall require more than eight hours' work, for a day's labor * * * is guilty of a misdemeanor." The statute does not define the meaning of "contracting with the State or a municipal corporation." Doubtless a person who is a mere employee of the State or of a municipal corporation contracts for the performance of his service. I suppose, however, the statute was intended to apply to the case of what is known in law as an "independent contractor;" that is to say, one who contracts to perform the work at his own risk and cost, —the workmen being his servants, and he (not the State or corporation with whom he contracts) being liable for their misconduct. If it does not apply exclusively to such contractors, it includes them. If not, that is the end of this case, for it does not appear in the indictment that the defendant was not an independent contractor. Now, while, as I have said, if the State itself prosecutes a work, it may dictate every detail of the service required in its performance—prescribe the wages of workmen, their hours of labor, and the particular individuals who may be employed; —no such right exists where it has let out the performance of the work to a contractor, unless it is reserved by the contract. The State in this respect stands the same as its citizens. Its rights are just as great as those of private citizens, but no greater.

As the law can not be upheld either as a valid exercise of the police power or because the work was being done for the State, to sustain it some other ground must be found on which it may rest. Only one is suggested. It is contended that the legislature may punish criminally a violation by the contractor of his obligations assumed under the provisions of this law. This presents the question of whether the legislature can make the breach of a civil contract, solely as such, a criminal offense. I am not now prepared either to assert or deny the correctness of the proposition. Granting, however, the claim that the legislature can provide for the punishment criminally of a willful violation by the contractor of the contract provisions alluded to, it is sufficient to say that the statute before us does not purport to do anything of that kind. If it had provided that any person who, having contracted with the State or a municipality not to require or suffer his employees or workmen to labor more than eight hours a day, should violate that agreement, then the question discussed would be presented. Prior to and at the time of the enactment of the section of the Penal Code no law had ever required municipal or State contracts to contain any stipulation as to the time the contractors'

workingmen should be suffered or required to labor. The labor law, as originally passed, on the same day authorized, in express terms, overwork for extra compensation in the performance of State and municipal contracts. The penal statute draws no distinction between contractors whose contracts had been made prior to its enactment and those who might contract subsequently. To fall within its provisions, it was sufficient that on the day after its enactment a contractor should require more than eight hours' work a day, though he was engaged in the performance of a contract years old, and containing no agreement relating to the hours of labor. The statute does not assume to punish an offender against its provisions because he has violated any contract, but solely because he has done the prohibited act, i. e., required more than eight hours' labor, regardless of the terms and conditions of his contract. The statute should therefore be condemned in its entirety, and can not be upheld as to the limited class of cases in which it may be the legislature had the power to act, but has not acted.

The order should be reversed, the demurrer sustained, and the defendant discharged.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—CONTROL OF LOCOMOTIVE—CONSTRUCTION OF STATUTE—*Louisville and Nashville Railroad Company v. Goss, Supreme Court of Alabama, 34 Southern Reporter, page 1007.*—Peter F. Goss sued the above-named railroad company to recover damages for injuries received while acting as a locomotive engineer in its employment. The injuries for which Goss sued were received while he was under the locomotive engaged in packing a hot box. While in that situation he ordered the fireman to move the reverse lever backward three feet. By a misunderstanding the fireman moved the locomotive, in consequence of which the injuries sued for were inflicted. The plaintiff's right of action was based on subdivision 5 of section 1749 of the Code of 1896, known as the Employers' Liability Statute, and the principal question for consideration was whether the fireman was at that time a person in charge or control of a locomotive within the contemplated meaning of the statute. Judgment was granted Goss in the circuit court of Jefferson County, from which an appeal was taken resulting in a reversal of the judgment of the court below.

The opinion of the court was delivered by Judge Dowdell, from whose remarks the following is quoted:

The facts without conflict show that the fireman was in the engine cab in obedience to the command of the plaintiff, and there to carry out the orders of the latter while he was under the engine for the purpose of packing the hot box. The fact that the engineer was under the engine while the fireman was in the cab did not change their relations, one to the other, as to authority and control. In point of superiority, the engineer was as much present and in charge and control of the locomotive as if he had been on his seat in the cab directing the fireman in the performance of some act. It is not in the power of the engineer, as long as he is present, by any act of his, to

change the relationship between himself and the fireman, as to superior authority in the management and control of a locomotive, so as to fix a liability on the master for the negligent conduct of the fireman. The statement of the engineer that the fireman was in charge of the locomotive at the time of the accident can be regarded as nothing but the opinion of the witness, and the statement of an erroneous conclusion on the undisputed facts in the case.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—EFFECT OF STATUTORY PROVISIONS—*Snyder v. Pennsylvania Railroad Company, Supreme Court of Pennsylvania, 55 Atlantic Reporter, page 778.*—This was an action by Minerva B. Snyder to recover damages for the death of her husband. Snyder was a fireman in the employment of the defendant company and was killed as a result of the derailling of the locomotive, caused by running over cattle on the railway track in Center County, Pa. Two statutory provisions were relied upon as giving grounds for recovery of the damages sought. First, that the railroad company had not, although engaged in interstate commerce, equipped its cars with automatic car brakes as prescribed by the act of Congress of March 2, 1893. Second, that it had neglected to maintain fences along the line of the road where the accident occurred, as provided by a special act of the legislature applying only to Center County. The court of common pleas of Center County had denied the right of the plaintiff to recover, which judgment was affirmed by the supreme court. The language of the court as to the points named is in part as follows:

It is argued that, if defendant had complied with the requirements of the act of Congress as to air brakes, the train could have been stopped after the cattle were seen; or, if it had complied with the special act requiring the fencing of the track they would not have been upon it. The learned trial judge was of the opinion that the accident was caused by the negligence of the locomotive engineer on whose engine Snyder was serving as fireman: * * * that on the undisputed facts the equipment of the cars with the air brake could not have prevented the accident, or, rather, that the absence of such equipment in no way contributed to it, and therefore that negligence in that particular can not be imputed to defendant so as to fix a liability in this case.

We decline at this time to pass any opinion on the effect of the act of Congress requiring air brakes upon cars of railroads engaged in interstate commerce, because such opinion is not necessary. Whether the Constitution of the United States authorizing Congress to regulate interstate commerce extends so far as to compel the adoption of an air brake on traffic wholly within the State carried on in obedience to its charter and strictly within State laws, may become a question where the cause of the accident is attributable to a neglect of the provisions of the act of Congress. But that is not this case. Under the facts here, the absence of the automatic air brake was in no sense the cause of the accident, and consequently has no part in the decision of the cause.

As to the special act requiring fencing, there is no doubt, on the authorities cited, that in those States having general laws requiring all railroads to fence their right of way, a very different degree of responsibility would be imposed, because there the fencing is required for the protection of the general public from injury; but here the special act is to provide for the payment to the owner of cattle his loss from neglect to fence. As was aptly said in *Carper v. Receivers of Norfolk and Western Railroad Company*, 78 Fed. 94, 23 C. C. A. 669, 35 L. R. A. 135, as to a Virginia statute: "So far as the owner of stock is concerned, the remedy is plain and adequate. Had the legislature intended to provide an additional liability on railroad companies for injuries to persons brought about by the failure of such companies to construct fences at the places designated in the statute, it would certainly, concerning a matter of such universal importance, have used apt and unequivocal language."

The judgment is affirmed.

EMPLOYERS' LIABILITY—RIGHT OF ACTION FOR INJURIES CAUSING DEATH—CONSTITUTIONALITY OF STATUTE—*Utah Savings and Trust Company v. Diamond Coal and Coke Company*, *Supreme Court of Utah*, 73 *Pacific Reporter*, page 524.—This was an action brought by the trust company, as administrator of the estate of John Tasanen, to recover damages from the coal and coke company for the death of the deceased while engaged as a miner in its employment in its mines in the State of Wyoming. While Tasanen was engaged in the proper place of his employment a fire broke out, supposedly in the shack or room in one of the entries in which combustible material had accumulated, which fire cut off his usual mode of exit from the mines. When the fire was discovered, instructions were given as to how egress might be obtained, but none of the men in the portion of the mine in which Tasanen was at work escaped except the drivers. The district court of Weber County gave judgment in favor of the plaintiff, from which the coal company appealed. The supreme court affirmed the judgment of the court below. Section 3448, Revised Statutes of 1899, provides for a recovery for the death of a person caused by wrongful act, neglect, or default, where if death had not ensued the party injured could have maintained an action to recover damages in respect thereof. The next section limits such damages to the sum of \$5,000, and provides that every such action shall be brought by and in the name of the personal representative of such deceased person. Subsequently to the enactment of this statute a provision of the constitution authorized recovery in the case of injury or death resulting from the failure of any mining company to comply with mine regulations that might be enacted by the State legislature, and another section of the constitution prohibited the enactment of a law limiting the amount of damages to be recovered for causing the injury or death of any person. The mining company based its appeal on the points presented

in these provisions of law, which were disposed of by Judge McCarty, who delivered the opinion of the court, in the following manner:

Appellant insists that section 3449 is in conflict with the provisions of the constitution, because it attempts to limit the amount of damages in this class of cases to \$5,000, and therefore was not continued in force by section 3, article 21, of the constitution. It is elementary that where a part of a statute is in conflict with the constitution, but the remainder is in harmony with it, if it can be done the parts will be separated, and that which is constitutional will be upheld. Black (Int. Law, p. 96), thus states the rule: "It frequently happens that some parts, features, or provisions of a statute are invalid by reason of repugnancy to the constitution, while the remainder of the act is not open to the same objections. In such cases it is the duty of the courts not to pronounce the whole statute unconstitutional, but, rejecting the invalid portions, to give effect and operation to the valid portions." Judge Cooley, in his work on Constitutional Limitations (6th ed. p. 211) in part says: "If when the unconstitutional part is stricken out, that which remains is complete in itself, and capable of being executed in accordance with the apparent legislative intent, wholly independent of that which is rejected, it must be sustained." This doctrine has been repeatedly declared and followed by this court. (*State v. Beddo*, 22 Utah, 432, 63 Pac. 96; *Ritchie v. Richards*, 14 Utah, 345, 47 Pac. 670; *Eureka v. Wilson*, 15 Utah, 65, 48 Pac. 150, 62 Am. St. Rep. 904; *Ex parte Duncan*, 1 Utah, 81.) That portion of the Wyoming statute limiting the amount of recovery in this class of cases to \$5,000, while it is repugnant to the provisions of the constitution of that State, is susceptible of being separated from the remainder of the act, which is not open to the same objection; and when so severed the part of the act not in conflict with the constitution is complete in itself, and capable of being enforced in conformity with the general purpose of the act. (*Dunn v. City of Great Falls*, 13 Mont. 58, 31 Pac. 1017.)

The next contention of appellant is that the trust created by the statute of Wyoming can only be enforced by a trustee appointed in that jurisdiction. While there are a few decisions to the contrary, the great weight of authority holds that a legal liability once created, either by the rules of the common law or by statute, can be enforced, and a right of action maintained, in any court having jurisdiction of such matters, provided jurisdiction of the parties can be obtained, and the action itself is not opposed to good morals or the policy of the State where it is brought. In the case of *White v. Railway Co.* (25 Utah, 346, 71 Pac. 593), Mr. Chief Justice Baskin, in discussing this question, says: "While there is some conflict of decision on the subject, it is generally held that a right given by the statute of one State will be recognized and enforced in the courts of another State."

Continuing the court said:

At the close of the testimony for respondent, appellant moved the court for a nonsuit on the ground that no damages had been proved, and the action of the court overruling the motion is now alleged as error. The record shows that deceased at the time of his death was a stout, healthy man, 42 years of age, and that his son, who was 20 years of age, was living with him. Under these circumstances, the question of damages was one for the jury to determine; and the trial court having properly submitted this question to it, under the constitution

and a long list of decisions of this court on this question, we are powerless to interfere, even though we might differ with the jury as to what would, under the facts disclosed, be a fair and just verdict.

The contention that the evidence shows contributory negligence on the part of the deceased is entirely unsupported by the evidence. There is not a word of testimony that tends to show that the deceased knew, or that it was his place to know, what the conditions were in and around the shack; and he had a right to assume that the company would do its duty, and exercise ordinary care and caution to prevent fires and other casualties in the mine where he was at work.

We find no reversible error in the record. The judgment is affirmed, with costs.

FREE PUBLIC EMPLOYMENT OFFICES—EMPLOYERS HAVING EMPLOYEES ON STRIKE—CONSTITUTIONALITY OF STATUTE—*Mathews v. People*, Supreme Court of Illinois, 67 Northeastern Reporter, page 28.—Murray Mathews was convicted in the criminal court for Cook County of operating a private employment agency for hire without a license and without having given bond. He appealed on the ground that the law on which the action was based was unconstitutional. There was no controversy as to the facts, and the section having special application to his case was not in itself unconstitutional, but the law contained a provision for the establishment of free public employment offices, one clause of which forbade the furnishing of lists of applicants for positions to employers whose employees were on strike or locked out. (For full text of the law see Bulletin of the Department of Labor, No. 22, page 491.) The supreme court held that this discriminating provision was unconstitutional and that it so permeated the whole law that no part of it could be enforced. Judge McGruder announced the decision of the court in an elaborate opinion, from which the following is quoted:

All the way through the act, the employer seeking men to work for him, and the employee seeking work to do, are placed upon the same footing, and are equally entitled to the benefits of the act in question. Employers, however, are arbitrarily divided into two classes—one class where a strike or lockout may exist, and another class where no strike or lockout exists. There is no rational basis in law or justice for this distinction, where the language is so broad as to include as well those who have caused the strike or lockout for good reasons as those who have caused such strike or lockout without any good reason. The prohibition contained in section 8 not only affects the class of employers there named, but it also affects the persons seeking employment, with whom such employers might otherwise come in contact; that is to say, not only the employers whose men are on a strike or are locked out are affected by the prohibition, but laborers or employees who might desire to fill the places of the employees who are on a strike or are locked out are also affected by it. The applicants for employment are deprived of the privilege of working for the class of employers named in section 8. That section, therefore, strikes at the interests of applicants for work and of employers seeking work or labor.

An employer whose workmen have left him and gone upon a strike, particularly when they have done so without any justifiable cause, is entitled to contract with other laborers or workmen to fill the places of those who have left him. Any workman seeking work has a right to make a contract with such an employer to work for him in the place of any one of the men who have left him to go out upon a strike. Therefore, the prohibition contained in section 8 strikes at the right of contract, both on the part of the laborer and of the employer. It is now well settled that the privilege of contracting is both a liberty and a property right. Liberty includes the right to make and enforce contracts, because the right to make and enforce contracts is included in the right to acquire property. Labor is property. To deprive the laborer and the employer of this right to contract with one another is to violate section 2 of article 2 of the constitution of Illinois, which provides that "no person shall be deprived of life, liberty or property without due process of law." It is equally a violation of the fifth and fourteenth amendments of the Constitution of the United States, which provide that no person shall be deprived of life, liberty, or property without due process of law, and that no State shall deprive any person of life, liberty, or property without due process of law, "nor deny to any person within its jurisdiction the equal protection of the laws." [Cases cited.]

Section 8 draws an unwarrantable distinction between workmen who apply for situations to employers where there is no strike or lockout and workmen who do not so apply, and it also draws an unwarrantable distinction between employers who may have the misfortune to be the victims of a strike or lockout and employers who do not have such misfortune; that is to say, section 8 does not relate to persons and things as a class, or to all employers, but only to those who have not been the victims of strikes or lockouts. "Where a statute does this—where it does not relate to persons or things as a class, but to particular persons or things of a class—it is a special, as distinguished from a general, law." The conclusion is inevitable that this section 8 is a provision "in aid of strikes and strikers, whether right or wrong, and regardless of the justice [or] of the propriety of the strike or lockout."

By the terms of this law, the statute creates free employment agencies, and provides for the payment of those who operate them out of the money of the people of the State; and yet it singles out a particular class of citizens, and, without cause, deprives them of the benefits of the provisions of the act, while it grants such benefits to another class of persons, who have no greater right to the same than the persons subjected to the deprivation.

The fourteenth amendment to the Constitution of the United States provides, that "no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States, nor shall any State deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws." In interpreting this provision of the Federal Constitution, the Federal and State courts hold an act like the one here under consideration, which is unduly discriminating and partial in its character, to be unconstitutional. In other words, legislation of this kind is condemned by the courts. The legislature has no power to deny to the employer whose men are out upon a strike or are locked out the right to obtain workmen from these free

employment agencies, and at the same time to grant such right to other employers not similarly situated.

It is claimed, however, by the attorney-general, that section 8 can be eliminated from the employment act without invalidating the rest of the act.

In the case at bar, if section 8 be eliminated from the employment act, the other sections, without it, would cause results not contemplated or desired by the legislature. This is so because, without the obnoxious clause or section, all employers, including those whose workmen are out upon a strike or are locked out, as well as all others, would be entitled to the benefits of the act. But clearly it was the intention of the legislature, by inserting section 8 in the act, to deprive the class of employers therein named of the benefits of the act. Consequently, the elimination of that section would not be in accordance with the manifest intention of the legislature. An elimination of section 8 would make the act apply to all classes of employers, and thereby cause a result evidently not contemplated or desired by the legislature. If all the sections of the act be construed together, it is evident that the legislature would not have created the free employment agencies in question, unless the class of employers mentioned in section 8 were excluded from the operation of the act. It follows that the employment act of April 11, 1899, must be regarded as unconstitutional as an entirety.

GARNISHMENT—JUDGMENT OF SISTER STATE—DOMESTIC JUDGMENT—SENDING CLAIM OUT OF STATE—*Baltimore and Ohio Southwestern Railroad Company v. Adams, Supreme Court of Indiana, 66 Northeastern Reporter, page 43.*—This was an action by Charles Adams against the railroad company above named to recover a sum claimed to be due as wages. The company had been garnisheed in Kentucky by a creditor of Adams and had been required to pay to this creditor the sum claimed by Adams in this action. The circuit court of Jackson County rendered judgment against the railroad company and denied a new trial, whereupon the company appealed, basing their claim on the ground that the decision of the circuit court was contrary to law in that it failed to give full faith and credit to the records and judicial proceedings of the State of Kentucky. Prior to the rendering of the decision in Kentucky a judgment had been given Adams for the amount due, though the action had been commenced in Kentucky before the beginning of the suit in Indiana. There was also a claim that the Kentucky judgment was invalid because the original creditor had violated the provisions of sections 2283 and 2284, Burns's Revised Statutes, 1901, which prohibited the sending of a claim outside the State for the purpose of garnisheeing money due a debtor. The decision of the supreme court reversed the judgment of the court below and ordered it to allow the appellant company a new trial on the grounds which appear in the following quotations from the remarks of Judge Gillett, who announced the opinion of the court:

It is not necessary to set out the proceedings of said Kentucky court in detail, further than to state that appellee [Adams] had personal notice of said suit. No question is raised as to the jurisdiction of the Kentucky court over the res, or as to its jurisdiction over the parties litigant in this action. If the judgment is valid, there has been a sequestration of the original debt; and, if it can be said that the appellant has been compelled to pay the same to a third person, it should now be credited with the payment.

The governing principle of the garnishee's exemption from a second liability is the injustice of compelling him to pay, at the suit of his creditor, that which a court having authority so to do has compelled him to pay to another. It is obvious, therefore, that he must act fairly and without collusion. Where the principal debtor is not actually in court, and there is reason to suppose that he is not advised of the suit, the garnishee ought at least to answer all facts within his knowledge, that, if the court were advised of, would presumably lead it to refuse to subject the fund to sequestration. In this case appellant caused appellee to be personally notified of the pendency of the suit in Kentucky (aside from the judicial notice that he received), and disclosed to the court the nature of the demand, and sought to claim the exemption of appellee under the laws of Indiana. The burden was on appellee, the judgment being shown to be valid on its face, to show facts that would render it equitable and just to require appellant to pay again.

The evidence in this case tends to show that the original creditor violated our statutes, in sending the claim without the State for the purpose of garnishment (sections 2283, 2284, Burns's Rev. Stat. 1901); but it does not appear that appellant failed to disclose any defense within its knowledge. A wrong has been done the appellee, but its consequences ought not to be visited upon the appellant, in the absence of any showing that it was a party to or responsible for such wrong.

Counsel for appellee wholly misapprehend the effect of the fact that appellee obtained a judgment on his claim in this State before judgment was rendered in the Kentucky court. It is to be remembered that the action in Kentucky was commenced, and service was there had upon appellant, before the institution of this suit. The fact that a judgment was obtained in this State was in no wise inconsistent with, but was based on, the fact that the appellant owed the appellee, and that was the basis of the garnishment in Kentucky. The effect of the pendency of said suit merely conferred a privilege upon the appellant to seek a stay of proceedings in this action. [Cases cited.]

We think it clear that the court below did not give the judgment of the Kentucky court, duly certified as it was, the full faith and credit that it was entitled to under the Federal Constitution. (Railroad Co. v. Sturm, 174 U. S. 710, 19 Sup. Ct. 797, 43 L. Ed. 1144.)

A motion has been made to dismiss the appeal in this case, but, in view of the question involved, the motion is overruled.

Judgment reversed, with an instruction to the circuit court to grant appellant's motion for a new trial.

LABORERS' LIEN—WHO ENTITLED—PRIVITY OF CONTRACT—*Wondike Lumber Company v. Williams Brothers*, Supreme Court of Arkansas, 75 *Southwestern Reporter*, page 854.—In the circuit court of Little

River County, Williams Brothers had obtained a judgment against the Long Pine Lumber Company for a sum of money due on a contract for cutting and delivering logs at their mills. Williams Brothers had done part of the labor themselves and had employed a number of persons to assist in the labor. From this judgment the Klondike Lumber Company, as intervener makes an appeal, it having purchased the lumber manufactured by the Long Pine Lumber Company at the time when the latter quit business. The original action was brought under the provisions of section 4766, Sand. & H. Dig., which gives to laborers a lien on the product of their labor for the amount due them. The appellants claim that this statute does not apply here, but the court ruled to the contrary, affirming the judgment of the court below.

Judge Riddick, after stating the facts, announced the decision of the court. From his remarks the following is taken:

The question presented by this appeal is whether certain contractors and laborers had a lien on lumber manufactured by the Long Pine Lumber Company and sold by them to the appellant Klondike Lumber Company. Our statute gives laborers who perform work and labor a lien on the production of their labor for the amount due them for such work and labor. (Sand. & H. Dig., sec. 4766; acts 1895, p. 39.) The statute, as it now stands in the acts of 1895, is silent as to whether the labor shall be done under a contract or not, but of course it was not intended that a mere trespasser should have a lien. The labor must be done either under a contract with the owner or under circumstances showing that the owner consented thereto, though a majority of us are of the opinion that it is unnecessary that the laborer should perform the work under a contract in direct privity with the owner of the property. If it is done under a contractor who has a contract with the owner for the performance of the work, then it sufficiently shows the consent of the owner, though in such a case the lien could not exceed the amount agreed to be paid by the owner to the contractor for the performance of the work. It might even be limited to the amount due the contractor at the time the action to enforce the lien is commenced, but under the facts of this case that question need not be considered. All that we need say here is that the laborers who cut and hauled the timber to the mill are not debarred from claiming a lien by the mere fact that they were not directly employed by the owner of the timber. It is sufficient that they worked under one who had a contract with the owner to do the work, and that the owner has paid neither the contractor nor the laborer.

On the question as to whether these men who cut the timber into logs and hauled and placed them on the skidway at the mill of the owner are entitled to a lien on the lumber made from the logs there may be more reason to doubt. But their labor was part of the work necessary to change the timber into lumber. It contributed directly towards the production of the lumber, and we are of the opinion that they have a lien, though the aggregate amount of these liens can not exceed the sum which the owner agreed to pay the contractors for performing the work.

As to the contractors, we have several times held that a contractor is not a laborer within the meaning of the statute giving persons liens who perform work and labor, the statute being intended to protect

the actual laborer, and does not apply to contractors, or those who only superintend the labor of others. The mere fact, therefore, that Williams Bros. contracted to do this work, and hired persons to do it, gives them no lien; but they also themselves performed work and labor under their contract, and to the extent of the value of their own labor they have liens as other laborers have. This lien, we think, should include the value of the use of their wagon and team when actually driven and used by them in performing the work; for in such a case the labor of one who uses a wagon and team or other instrumentality furnished by himself in the performance of his work includes both the work of himself and that of the instrumentality by which he performs it, and he has a lien for the value of all his labor.

PROTECTION OF WAGES—CONTRACTORS' BONDS—CONSTITUTIONALITY OF STATUTE—*Gibbs v. Tally, Supreme Court of California, 65 Pacific Reporter, page 970.*—In this case William H. Gibbs sued Mary A. Tally and another to recover damages for failure to comply with section 1203, Code of Civil Procedure, relating to the filing of bonds by contractors for the security of payments to laborers and material men. Gibbs had been awarded judgment in the superior court of Los Angeles County, which judgment had been affirmed in department two of the supreme court. On rehearing in bank this judgment was reversed and Mrs. Tally declared to be free from liability on the ground that the statute on which the action was based was unconstitutional. (For full text of the law see Bulletin of the Department of Labor, No. 36, page 1001.) Judge Temple in delivering the opinion of the court used in part the following language:

The statute directs that every contract required to be filed by the provisions of the chapter relating to liens of mechanics and others shall be accompanied by a good and sufficient bond, and that any laborer or material man shall have an action to recover upon the bond for the value of labor and materials, not exceeding the amount of the bond; and such action shall not affect his lien. A failure to comply with the provisions of the section rendered "the owner and contractor jointly and severally liable in damages to any and all material men, laborers, and subcontractors entitled to liens upon property affected by said contract." The statute does not say who shall cause this bond to be executed, nor to whom it shall in form be made payable. It does not undertake that the contractor shall faithfully perform his contract. In short, there is in it nothing which can be of advantage to the owner in any possible event. On the other hand, no possible loss will accrue to the contractor by a failure to provide the bond. The declaration that he shall be severally and jointly liable with the owner is useless verbiage. The contractor is already liable for all labor or materials furnished to him or by his authority. The only person, therefore, upon whom a penalty is put for the failure is the owner. He, therefore, and he only, is required to furnish the bond; and, in effect, the bond is conditioned only that the contractor will pay "such" persons the value of labor and materials so furnished to

him; and the action by a lienor does not affect his lien, or an action commenced for the foreclosure of it. The section assumes a valid contract, under which, if the contract is performed, the lienors can have the entire contract price distributed to them. But after that has been done, or even before it, a suit can be brought upon the bond, or, if it has not been filed, against the owner, to recover an additional 25 per cent upon the contract price, and that is this precise case. The material men and laborers could have demanded security from the contractor before furnishing materials or labor. The statute attempts to compel the owner to furnish security for them in a matter to which he is not a party, and in which he is not concerned. The cost may exceed the contract price, because material men combine to charge exorbitant prices, or through bad management of the contractor, or because prices have increased since the contract was let, or from other causes. If this can be required from the owner it lessens materially the value of his contract. In fact, so far as price is concerned, it deprives him of it. He has no assurance that his house will be built for the stipulated price. There is no more reason for requiring the owner to give this security than there would be in requiring it from any other person in the community. That the owner may be required to pay more than the contract price is not the only injustice which may result from this most unreasonable statute. The owner, or the sureties he is required to furnish, would be responsible in case the contractor failed to perform his contract. Suppose the structure failed to comply with the contract—was in fact so defective as to be useless—and the owner should refuse to pay for it? The very fact that he was injured by the failure of the contractor would create the liability on his part or upon his sureties. Whether the owner is not the principal on the bond, or the party for whom the sureties undertake, I will not discuss. The undertaking, in effect, certainly is that the contractor will pay certain debts if he incurs them; but he is not specially required to furnish the bond, and, as I have stated, incurs no penalty for not doing so, while the owner does.

It is perfectly manifest that this section, if valid, places an unreasonable restraint upon the owner of property in regard to the use thereof. It compels him to become responsible for liabilities he has not incurred, and which were not created for his benefit. It practically forbids him from improving his property by letting a contract unless he becomes liable, or furnishes sureties who will be so liable, for 25 per cent above the contract price, and for the same amount in case the contractor so far fails in keeping his contract that the labor and materials are without value to him, and the contractor has no valid claim against him on account thereof. To impose this burden upon an owner is to some extent to deprive him of his property, for the value of property consists in the right to use it. It was said by Judge Comstock, in *Wynhamer v. People*, 13 N. Y. 378: "When a law annihilates the value of property, and strips it of its attributes by which alone it is distinguished as property, the owner is deprived of it according to the plainest interpretation, and certainly within the constitutional provision, intended expressly to shield personal rights from the exercise of arbitrary power." It is also an unreasonable and unnecessary restriction upon the power to make contracts. It clearly contravenes the provisions of section 1, art. 1, of the constitution of the State, and the fourteenth amendment to the Constitution of the United States.

SEAMEN—PAYMENT OF WAGES IN ADVANCE—CONSTITUTIONALITY OF STATUTE—APPLICATION TO FOREIGN VESSELS—*Patterson et al. v. The Endora*, Supreme Court of the United States, 23 Supreme Court Reporter, page 821.—B. M. Patterson and others libeled the British bark *Endora* to recover certain wages paid in advance in violation of the act of Congress of December 21, 1898. A review of the facts in the case and of the preliminary proceedings appears in the following statement made by Mr. Justice Brewer:

On December 21, 1898 (30 Stat. at L. 755, 763, chap. 28, U. S. Comp. Stat. 1901, pp. 3071, 3080), Congress passed an act entitled "An Act to Amend the Laws Relating to American Seamen, for the Protection of Such Seamen, and to Promote Commerce." The material portion thereof is found in Sec. 24, which amends Sec. 10 of chapter 121 of the Laws of 1884, so as to read:

"Sec. 10. (a) That it shall be, and is hereby, made unlawful in any case to pay any seaman wages in advance of the time when he has actually earned the same, or to pay such advance wages to any other person. Any person paying such advance wages shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished by a fine not less than four times the amount of the wages so advanced, and may also be imprisoned for a period not exceeding six months, at the discretion of the court. The payment of such advance wages shall in no case, excepting as herein provided, absolve the vessel or the master or owner thereof from full payment of wages after the same shall have been actually earned, and shall be no defense to a libel, suit, or action for the recovery of such wages. If any person shall demand or receive, either directly or indirectly, from any seaman or other person seeking employment as seaman, or from any person on his behalf, any remuneration whatever for providing him with employment, he shall, for every such offense, be liable to a penalty of not more than one hundred dollars."

"(f) That this section shall apply as well to foreign vessels as to vessels of the United States; and any master, owner, consignee, or agent of any foreign vessel who has violated its provisions shall be liable to the same penalty that the master, owner, or agent of a vessel of the United States would be for a similar violation: *Provided*, That treaties in force between the United States and foreign nations do not conflict."

The appellants were seamen on board the British bark *Endora*, and filed this libel for wages in the district court of the United States for the eastern district of Pennsylvania. By an agreed statement of facts it appears that on January 22, 1900, they shipped on board such bark to serve as seamen for and during a voyage from Portland, Me., to Rio and other points, not to exceed twelve months, the final port of discharge to be in the United States or Canada, with pay at the rate of one shilling for forty-five days and twenty dollars per month thereafter. At the time of shipment twenty dollars was paid on account of each of them, and with their consent, to the shipping agent through whom they were employed. On the completion of the voyage, they, having performed their duties as seamen, demanded wages for the full term of service, ignoring the payment made, at their instance, to the shipping agent. The advanced payment and contract of shipment were not contrary to, or prohibited by, the laws of Great Britain. It

was contended, however, that they were prohibited by the act of Congress, above quoted, and that such act was applicable. The district court entered a decree dismissing the libel. (110 Fed., 430.) [See Bulletin of the Department of Labor, No. 38, p. 171.] On appeal to the circuit court of appeals for the third circuit, that court certified the following questions to this court:

"First. Is the act of Congress of December 21, 1898, properly applicable to the contract in this case?

"Second. Under the agreed statement of facts above set forth, upon a libel filed by said seamen, after the completion of the voyage, against the British vessel, to recover wages which were not due to them under the terms of their contract or under the law of Great Britain, were the libellants entitled to a decree against the vessel?"

These questions were both answered in the affirmative by the Supreme Court. From the opinion of the court, as delivered by Mr. Justice Brewer, the following is quoted:

Applying the ordinary rules of construction it does not seem to us doubtful that the act of Congress, if within its power, is applicable in this case.

When, as here, the statute declares, in plain words, its intent in reference to a prepayment of seamen's wages, and follows that declaration with a further statement that the rule thus announced shall apply to foreign vessels as well as to vessels of the United States, it would do violence to language to say that it was not applicable to a foreign vessel.

But the main contention is that the statute is beyond the power of Congress to enact, especially as applicable to foreign vessels.

We are unable to yield our assent to this contention. That there is, generally speaking, a liberty of contract which is protected by the 14th amendment, may be conceded; yet such liberty does not extend to all contracts.

And that the contract of a sailor for his services is subject to some restrictions was settled in *Robertson v. Baldwin*, 165 U. S. 275, 41 L. ed. 715, 17 Sup. Ct. Rep. 326 [See Bulletin of the Department of Labor, No. 11, p. 509], in which sections 4598 and 4599, Rev. Stat. (U. S. Comp. Stat., 1901, pp. 3115, 3116), in so far as they require seamen to carry out the contracts contained in their shipping articles, were held not to be in conflict with the 13th amendment, and in which a deprivation of personal liberty not warranted in respect to other employees was sustained as to sailors. We quote the following from the opinion (p. 282, L. ed. p. 718, Sup. Ct. Rep. p. 329):

"From the earliest historical period, the contract of the sailor has been treated as an exceptional one, and involving, to a certain extent, the surrender of his personal liberty during the life of the contract. Indeed, the business of navigation could scarcely be carried on without some guaranty, beyond the ordinary civil remedies upon contract, that the sailor will not desert the ship at a critical moment, or leave her at some place where seamen are impossible to be obtained—as Molloy forcibly expresses it — 'to rot in her neglected brine.' Such desertion might involve a long delay of the vessel while the master is seeking another crew, an abandonment of the voyage, and, in some cases, the safety of the ship itself. Hence, the laws of nearly all maritime nations have made provision for securing the personal attendance of the crew on board, and for their criminal punishment for desertion or absence without leave during the life of the shipping articles."

If the necessities of the public justify the enforcement of a sailor's contract by exceptional means, justice requires that the rights of the sailor be in like manner protected.

Neither do we think there is in it any trespass on the rights of the States. Contracts with sailors for their services are, as we have seen, exceptional in their character, and may be subjected to special restrictions for the purpose of securing the full and safe carrying on of commerce on the water. Being so subject, whenever the contract is for employment in commerce, not wholly within the State, legislation enforcing such restrictions comes within the domain of Congress, which is charged with the duty of protecting foreign and interstate commerce.

Finally, while it has often been stated that the law of the place of performance determines the validity of a contract, yet that doctrine does not control this case. It is undoubtedly true that, for some purposes, a foreign ship is to be treated as foreign territory. As said by Mr. Justice Blackburn in *Queen v. Anderson*, L. R. 1 C. C. 161, "A ship which bears a nation's flag is to be treated as a part of the territory of that nation. A ship is a kind of floating island." Yet when a foreign merchant vessel comes into our ports, like a foreign citizen coming into our territory, it subjects itself to the jurisdiction of this country. In *The Exchange v. M'Fadden*, 7 Cranch, 116, 136, 146, 3 L. ed., 287, 293, 297, this court held that a public armed vessel in the service of a sovereign at peace with the United States is not within the ordinary jurisdiction of our tribunals while within a port of the United States. In the opinion, by Chief Justice Marshall, it was said that "the jurisdiction of the nation within its own territory is necessarily exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it deriving validity from an external source would imply a diminution of its sovereignty to the extent of the restriction, and an investment of that sovereignty to the same extent in that power which could impose such restriction."

Again, in *Wildenhus's case*, 120 U. S. 1, sub nom. *Mali v. Hudson County Common Jail Keeper*, 30 L. ed. 565, 7 Sup. Ct. Rep. 385, in which the jurisdiction of a State court over one charged with murder, committed on board a foreign merchant vessel in a harbor of the State, was sustained, it was said by Mr. Chief Justice Waite (pp. 11, 12, L. ed. p. 567, Sup. Ct. Rep., p. 387):

"It is part of the law of civilized nations that when a merchant vessel of one country enters the ports of another for the purposes of trade, it subjects itself to the law of the place to which it goes, unless, by treaty or otherwise, the two countries have come to some different understanding or agreement."

It follows from these decisions that it is within the power of Congress to prescribe the penal provisions of section 10, and no one within the jurisdiction of the United States can escape liability for a violation of those provisions on the plea that he is a foreign citizen or an officer of a foreign merchant vessel. It also follows that it is a duty of the courts of the United States to give full force and effect to such provisions. It is not pretended that this Government can control the action of foreign tribunals. In any case presented to them, they will be guided by their own views of the law and its scope and effect; but the courts of the United States are bound to accept this legislation, and enforce it whenever its provisions are violated.

DECISIONS UNDER COMMON LAW.

COMPETENT EMPLOYEES—EMPLOYMENT OF MINORS—LIABILITY OF EMPLOYER—*Crisman et al. v. Shreveport Belt Railway Company et al.*, *Supreme Court of Louisiana*, 34 *Southern Reporter*, page 718.—This was an action by Mattie Crisman and others against the above-named railway company to recover damages for the death of James T. Crisman as a result of being run over by one of their cars. One point of interest was the claim of the plaintiffs that the motorman was incompetent by reason of youth and inexperience. The following extracts from the syllabus prepared by the court present its conclusions as to this subject:

1. It is negligence, on the part of an electric railway company whose line traverses a city, to have one of its cars in the charge of a young man only 18 years old, whose experience in the handling of an electric car dates only twenty days back.

2. For the shortcomings of such a motorman, in a case where the death of a human being has ensued, the car company will be held to the strictest accountability; and doubt as to whether the life of the deceased might not have been spared had the car been in the hands of a more experienced and more competent motorman will be construed against the car company.

EMPLOYERS' LIABILITY—RAILROAD RELIEF DEPARTMENT—FURNISHING SURGICAL ATTENDANCE—MALPRACTICE—*Haggerty v. St. Louis, Keokuk and Northwestern Railroad Company*, *Court of Appeals at St. Louis*, 74 *Southwestern Reporter*, page 456.—John Haggerty had sued in the circuit court of Lewis County, Missouri, and recovered a judgment for damages against the above-named company for an injury received while in its employment. The injury was a fracture of the right leg a few inches above the ankle joint. Immediately after the accident Haggerty had been taken to his home and a Dr. Smith called in to give treatment. He dressed the leg, and left Haggerty with a remark to the effect that that would answer until the railroad doctor came. On the following day the doctor referred to, one Bourne, came and examined the limb at the request of Dr. Smith, who was not present when Bourne arrived, but was invited to come in at his (Bourne's) request. It appears that the above-named railroad company was one of a number of companies whose relief departments were united under the name of the Burlington Voluntary Relief Department. This department was supported by sums deducted from the wages of the employees of the companies in proportion to their earnings, the resulting fund being used to pay the members' benefits when disabled by sickness or accident and, in case of their death, to pay benefits to their families, the railroad companies contributing when the members' fees were inadequate to the demands. Haggerty was a member of this association. Among the

rules of the relief department were provisions that benefits received from its fund should operate as a release and satisfaction of all claims for damages against the employing company for injuries or death, and that if any member or his legal representatives should bring suit on account of such injuries or death and the action should proceed to judgment or a compromise, all claims upon the relief fund should be precluded. Dr. Bourne, named above, was known as a medical examiner for the relief department. Among his duties were those of reporting the condition of sick and injured members, when members were unfit for duty, and when they were able to work, the preparing of claims for benefits, certifying bills for surgical treatment, and the performance of such other duties as might be required by the medical director. The relief association provided for the payments of such bills for surgical attendance as were approved by the medical director of the relief department. Haggerty received the treatment above referred to and undertook to go to work some months after the injury, but found himself unable to continue in the service of the company. He was again treated for a long time and was practically disabled for work most of the time for more than a year on account of his leg. It was alleged in Haggerty's claim that by a negligent setting of the bones the leg was crooked and shorter than the other one and that he was permanently crippled. The evidence tended to prove that the bones were not properly set nor was efficient and skillful surgery displayed in taking care of the fracture until it healed. Among the instructions given in behalf of the plaintiff Haggerty was one stating "that the defendant is liable for all negligent acts of its agents, within the general scope of their employment, while engaged in the business of said railroad company, and with the view to the furtherance of the railroad company's business. If the physician or surgeon who treated plaintiff's broken leg did so in furtherance of defendant's interests and directions, and it was the defendant's physician and surgeon who undertook to set and treat and doctor plaintiff's broken leg, the defendant is liable for negligence, if any, of such physician, whether he was sent without pay from plaintiff to defendant, or was sent under and in pursuance of the obligations of a contract between plaintiff and defendant." And further, "that the defendant is liable for the negligent acts of its agents, is liable in all matters done in the course of the agent's employment, even though the defendant did not authorize the specific act done. If the physician who treated and operated upon plaintiff's broken leg did so in the course of his or their usual employment with the defendant, then the act done was as the agent of the defendant." The defendant company asked the court to instruct the jury that "even though you find from the evidence that Dr. B. H. Smith was employed by Dr. J. J. Bourne professionally to treat plaintiff for the fracture of his right leg, being the fracture spoken of in the evidence, and even if you find that Dr. Smith did in fact, pursuant to such employment, treat plain-

tiff for such fracture, and find that he, Dr. Smith, treated plaintiff in an unskillful and careless manner, yet defendant would not be liable for such carelessness and unskillful treatment, unless you further find that Dr. Bourne was careless and negligent in the employment of Dr. Smith." From the judgment in favor of plaintiff the company appealed, the appeal resulting in a reversal of the judgment of the court below.

Judge Goode, speaking for the court, having stated the above facts, discussed one or two questions of secondary importance and then said:

Bourne's right to employ Smith is still more earnestly questioned, but we think that issue was for the jury under the evidence. The passage of the answer recited in the statement of fact alleges that the relief department had the option to furnish members surgical attention when injured, or refrain from doing so, but that the practice was to allow the injured member to select his own surgeon. Dr. Bourne testified that, while it was customary in certain cases to pay bills for treatment, it paid them only when the member was disabled by an accident. Further, he said, in effect, that, if he was satisfied the surgery a member was receiving was unskillful, he would make a report of it; that the relief department could advise as to the surgeon, but could not change one against the patient's will. Moreover, the regulations of the department directly empowered medical examiners to certify bills for surgical treatment; and those facts, while they do not conclusively prove Dr. Bourne was authorized to employ Dr. Smith, warrant the inference that he might do so without exceeding his duty; and, in fact, his authority was practically admitted when the answer said the relief department might, if it deemed best, employ surgeons for disabled members. There is evidence to show this right was exercised in this instance, whether it ever was in any other or not, and, as the pleadings and evidence stand now, a case was made for the jury as to whether the defendant was remiss in performing its duty. What its duty was, we will now inquire.

Granting that the plaintiff was negligently and unskillfully treated by physicians employed by the defendant company, the question arises whether the company's responsibility is to be determined by the doctrine of respondeat superior; in other words, whether the defendant is liable for their malpractice if it was reasonably careful in selecting them, or is only liable if it was not careful in that respect.

We are referred to a line of decisions holding that hospitals, and other bodies politic intended for charitable purposes or to assist in the performance of some function of government without expectation of profit, are not responsible for the negligence of servants and employees unless they are remiss in choosing them.

In our judgment the relief department organized by the defendant company, in view of the regulations provided for its government, can not be classed as a charity without doing violence to every significance that word bears, either in popular or legal usage. It is not a charity within the [common] definition * * * because the fund administered is not a gift by the employees, who make contributions; much less by the railroad company, which does not make any unless a deficit occurs. The fund is made up from sums contributed by the members for their mutual benefit, and to be enjoyed by them if they suffer from

sickness or accident. It is, in effect, a provision made by the employees to insure a stipend for them to live on if they are disabled, and a benefit to their families if they die. In addition to this, if disabled by accident, their medical attendance is paid out of the fund. This strikes us as a purely business arrangement on the part of the employees of the railroad company. But to call the enterprise a charity on the part of the company itself is extravagant, when we note that one of its purposes, as carved in high relief on the face of the regulations, is to prevent damage suits.

The petition charges that the defendant bound and obligated itself to furnish the plaintiff, as a member of the relief department, competent and skillful surgeons to wait on him, and, if such contract was in fact made, defendant is of course answerable if it failed to perform; that is to say, if it furnished a surgeon whose lack of skill resulted in injuring the plaintiff. But no evidence was adduced to show that any such contract or obligation was ever created by express words, and, if one existed, it arose by implication from the regulations of the relief department. Those regulations imposed no duty on the railroad company or its relief department to furnish surgeons, skilled or otherwise, for sick and disabled members. All that is said bearing on that matter is that the medical examiners may certify bills for surgical attendance, and that members accidentally hurt are entitled to payment of such bills, if approved by the medical examiner.

But we have held there was evidence tending to prove that in this instance the railroad company did hire surgeons to treat the plaintiff, though there was none to show he did not willingly accept them or preferred any one else. Unquestionably, if it undertook to supply plaintiff with surgical attendance, or deprived him of a choice in the matter, it was bound to employ reasonable care to get men of average skill. But did its obligation end there? As we have seen, to be exempted from the rule of respondent superior, the exemption can not be granted on the principle that it was operating a charity, and some other ground of immunity must be found.

Modern conditions make it imperative to hold many employers responsible for the torts of their servants, as a means of enforcing care in the prosecution of dangerous enterprises and the handling of dangerous implements and machinery. Railroad companies must see that their servants are cautious in operating trains, make all needful regulations, select their employees with that end in view, and discharge them when they are careless and unskillful. The application of the rule in question is especially called for when the misfeasance of the employee happens while he is engaged about the main business of his employer. In cases like this the surgeon is not regarded as sustaining in full measure the relation of servant to the railway company. That relation carries the right of direction and control of the servant by the master as to the mode in which the former shall do his work; and when an employer, instead of reserving in terms or by implication the right of direction, contracts for the exercise of independent judgment and skill on the part of the person employed, the latter is often regarded as a separate contractor, and alone responsible for his torts. [Cases cited.]

The defendant company was not primarily engaged in ministering to sick and disabled persons for profit, but, when it gave such ministrations, did so as an incident to its regular business. There is little

likelihood of railway companies or other employers becoming careless in the selection of physicians to wait on employees; and, as their business managers and superintendents are not selected for their expert knowledge of medical and surgical matters, they are unfit to supervise the work of physicians, and therefore the doctrine of respondeat superior can not well be applied to such matters. We think these are the real reasons why the courts have refused to extend the rule to them; and we need not be troubled because this course is inconsistent with the general doctrine that masters are answerable for the torts of servants, since the law aims at practical rather than theoretical ends, and regulates acts with reference to their consequences instead of their logical connection. The precedents, without exception, hold that, unless the evidence shows want of care in the selection of the surgeon, the servant injured by malpractice has no recourse against his employer. [Cases cited.]

It follows from the above considerations and authorities that the circuit court erred in refusing the instruction requested by defendant which is set out in the statement, and in giving several instructions asked by the plaintiff. The case should have been tried on the theory pointed out, to wit, that the liability of the defendant depends on whether it exercised due care in selecting physicians to wait on the plaintiff, if it furnished him with physicians. Instead of that theory being followed, the effect of the instructions to the jury was to leave it entirely out of view, and to hold the company liable for the surgeons' incompetency, however cautiously they may have been chosen.

The judgment is reversed, and the cause remanded.

INJUNCTION—DISCHARGE OF EMPLOYEES BECAUSE OF MEMBERSHIP IN LABOR UNION—BLACKLIST—*Boyer et al. v. Western Union Telegraph Company, United States Circuit Court for the Eastern District of Missouri, Eastern Division, 124 Federal Reporter, page 246.*—This is a bill brought by Boyer and others to procure an injunction against the Western Union Telegraph Company, prohibiting the discharge of employees on account of membership in the Commercial Telegraphers' Union, and also prohibiting the maintenance by said company of a blacklist. The bill also alleged that the company had conspired to destroy the Telegraphers' Union. The injunction was denied. The points involved were discussed in the following manner by Judge Rogers, who delivered the opinion of the court:

The first cause of complaint is that plaintiffs have been discharged without notice from the service of the defendant for no other cause than that they joined that union. But the answer to that complaint is that in a free country like ours every employee, in the absence of contractual relations binding him to work for his employer a given length of time, has the legal right to quit the service of his employer without notice, and either with or without cause, at any time; and in the absence of such contractual relations any employer may legally discharge his employee, with or without notice, at any time. The second ground for complaint is that defendant, its officers and agents, have unlawfully combined and confederated together to destroy the said union, and

intend discharging all the members of said union from the service of the defendant, and by threats, intimidation and coercion, and otherwise, are interfering with the plaintiffs and with others of their employees for uniting with the union, and are seeking to prevent those discharged from obtaining employment. I need not take time to multiply authorities to show that there is no such thing in law as a conspiracy to do a lawful thing. If the last allegation means anything, it is that the defendant, its officers and agents, have conspired to destroy the union by discharging all its members in its employ, and refusing to employ others, solely for the reason that they were members of the union. (But it is not unlawful, in the absence of contractual relations to the contrary, to discharge them for that or for any other reason, or for no reason at all.) Hence there is no such thing in law as a conspiracy to do that, and it matters not whether you call such an agreement a conspiracy, a combination, or a confederation.

True, it is alleged that defendant, its officers and agents, unlawfully combined and confederated to destroy the union. But what is unlawful is a question of law; whether a thing done is unlawful depends on what is done or threatened to be done. But what the defendant company, its officers and agents, combined or confederated to do in order to destroy the union, is the precise thing the complaint fails to show. The court must always be able to look at the facts and say that if these facts are true they are illegal; otherwise there is no ground for invoking its protective agency.

But it is said that defendant maintains a blacklist containing a list of names of such persons as may have incurred its displeasure and have been discharged from its service, and that, by methods not known to them, it prevents such discharged persons from getting employment as telegraph operators; that they have blacklisted people solely because they belong to the union, and that they intend to blacklist others for the same thing, etc. We have seen it is not unlawful to discharge plaintiffs because they belong to the union. Is it unlawful for defendant to keep a book showing that they were discharged because they belonged to the union? The union presumably, and especially in view of the allegations in the bill, is an honorable, reputable, and useful organization, intended to better the conditions and elevate the character of its members. Is it illegal for defendant to keep a book showing that it had discharged members of such a union solely because they belong to it? That seems to be the real essence of the bill. Is it illegal to notify others that it keeps such a book and that they can inspect it, or to inform others what such a book shows? That seems to be the ground of complaint. There can be no question about it; the positive, direct, and unequivocal allegation is that defendant keeps such a book; that plaintiffs are placed on it solely because they belong to the union, and have been discharged solely because they did belong to the union. Can a court of equity grant relief to a man who says for his cause of action that he belongs to a reputable organization, and that he has been discharged solely because he did belong to it; that his employer who discharged him keeps a book on which is placed his name, and has set opposite thereto the fact that he discharged him solely because he belonged to such organization; and that he gives that information to other persons, who refuse to employ him on that account? Suppose a man should file a bill alleging that he belonged to the Honorable and Ancient Order of Freemasons, or to the Presbyterian Church, or to the Grand Army of the Republic; that his employer had

discharged him solely on that account; that he had discharged others of his employees, and intended to discharge all of them, for the same reason; that he kept a book which contained all the names of such discharged persons, and set opposite the name of each discharged person the fact that he had been discharged solely on the ground that he belonged to such organization; and that he had given such information to others, who refused to employ such persons on that account. Is it possible a court of equity could grant relief? If so, pray, on what ground? And yet that is a perfectly parallel case to this as made by the bill.

INJUNCTION—STRIKES—LABOR UNIONS—*Gulf Bag Company v. Suttner et al.*, *United States Circuit Court for the Northern District of California*, 124 *Federal Reporter*, page 467.—This was a suit for the continuance of a restraining order issued at the instance of the Gulf Bag Company to restrain Suttner and others from intimidating the employees of the company. The facts sufficiently appear in the remarks of Judge Beatty in granting the continuance prayed:

The complaint alleges the existence of the San Francisco Labor Council of Federated Trades, of which defendants Benham and Zant are respectively president and secretary; that its objects are to compel the employers of labor to employ only union laborers; that the Cotton Bag Workers' Union, No. 10648, is a union association of which defendants Hanback and Tiedemann are respectively president and secretary, and some of whose members worked for complainant, and quit complainant's service on June 8, 1903; that all of defendants have conspired and combined to injure complainant's business, unless it shall employ only the members of such union; that on and after the 8th day of June, 1903, defendants assembled in large numbers about complainant's premises, and by unlawful threats, intimidations, and other unlawful means so intimidated complainant's employees as to prevent them from working. There are numerous affidavits attached to the complaint showing various unlawful acts by defendants, consisting of the application to complainant's employees of vile epithets and language, of threats against them, and, in a few instances, of actual personal assaults. Upon such showing a restraining order was issued, and the question now is whether it shall be continued until the case can be heard upon its merits.

By their affidavits the defendants specifically deny every unlawful act, the use of every threat, of every vile epithet or language charged to have been done or used by them, and they allege, as is the rule in such cases, "that the principal object of their union is, by mutual arrangements with the employers of its members, to secure satisfactory rates of wages, and to improve the efficiency of its members, and that it does not approve or tolerate violence for any purpose." There is no doubt that all the written stated objects in their records of organization are worthy and commendable, but the question is not as to the objects of their organization, stated or otherwise; it is what they do.

The law does give the right of peaceable persuasion. It is the abuse of this right which leads to all the trouble. In their desire to succeed they too often go in great numbers. Among them are generally some who are lawless and reckless of rights or consequences.

They do that which the conservative and better classes do not approve of, and the general result is that the conscious power of great numbers leads along from one act to another, to the usual end that violence and abuse are resorted to when advice and persuasion fail. But it must be understood that when any assemble in numbers for some object they must be held responsible for what their associates do, whether they approve of or advise it or not.

It is not in doubt that disagreement existed between complainant and its employees, and that the latter quit work; that some of such employees and some of their friends, after the strike, collected in the vicinity of complainant's works, and at least interviewed other employees, and that this occurred during several successive days; that one man at least—Jensen—was violently assaulted with a bludgeon and knocked down in that vicinity by somebody; that there is fair evidence of other assaults, there and at other places, upon the employees who continued to work; that it had grown so dangerous that the police officers found their presence necessary to preserve the peace. Objection was made to the use of a certified copy of a police officer's official report to his chief. It bears upon the issues, and bears the evidence of truth. The truth is what we want, and it will not be excluded for merely technical reasons, but it may be added that the result reached does not at all depend upon this report.

All laboring people fully understand that whenever they please, and for any cause, they have the right to quit work, whether as individuals or as organizations. They must also understand that all men, whether associated with them or not, have equal rights with them in the laboring world. The right to labor, or to cease it, must be as free to all as it is to water to seek its level. This Government is one of liberty under the law, and its people are free men; neither will tolerate the attempt of any to enforce assumed rights by crushing the inalienable rights of others. Until all recognize and obey that law the contest must and will go on.

I think, in the interest of peace and law, this restraining order should be continued. It is complained that it is too comprehensive in that it includes the members of both associations hereinbefore named. There is no question that the Cotton Bag Workers' Union is interested, for the striking employees of complainant were members thereof, and defendant Hanback, who is president of this union, says in his affidavit that the president and secretary of the other associations interceded in this matter to procure better wages for these employees. As these organizations work largely through their officers, it is not extravagant to conclude that both organizations took more or less interest in this contest.

Moreover, this restraining order does not deprive anyone of any right, nor require of him any wrong. It only requires that no wrong shall be committed, that no right shall be infringed. The order can do no harm, even if not clearly and absolutely justified, but I think the facts justify it, and, as it was made, so it is continued.

INJUNCTION -- STRIKES -- PICKETING INTERSTATE COMMERCE --
Knudsen et al. v. Benn et al., United States Circuit Court for the District of Minnesota, Fifth Division, 123 Federal Reporter, page 636.—

Knudsen and others who were engaged in the handling of freight at the docks of the Northern Pacific Railway Company at Duluth, Minn., petitioned the court for an injunction against certain men, members of an association of longshoremen, which should restrain them from interfering with the conduct of the complainants' business. These men, Benn and others, had formerly been in the employment of the freight handling company, but had struck, and it is against any interference with the employees procured to take their places that the company asks this injunction. An injunction was granted commanding the persons named and all associated with them to desist and refrain from in any manner interfering with, hindering, obstructing, or delaying the complainants' work "by trespassing in and upon the railroad yards and docks of the Northern Pacific Railway Company at Duluth, Minn., for the purpose of compelling or inducing, by threats, force, intimidation, violence, violent or abusive language, or persuasion, any employees of complainants to refuse or fail to perform their duties as such employees; also from compelling or inducing, or attempting to compel or induce, by threats, intimidation, force, violence, or abusive or violent language or persuasion, any of the employees of said complainants to leave their service; also from compelling or attempting to compel, by threats, intimidation, force, violent and abusive language, any person desiring to seek employment with them; also from establishing and maintaining spies and pickets at the place of work of complainants' employees, in, about, or adjacent to the yards and docks of said Northern Pacific Railway Company, or in or upon the streets and avenues of the city of Duluth, near by and leading to and from said yards and docks, for the purpose of inducing or compelling, by threats, intimidation, violence, violent or abusive language or persuasion, any employee of complainants to fail or refuse to perform his duties as such, or for the purpose of interviewing employees of complainants, and inducing them not to remain in the complainants' employment."

The grounds on which the injunction was granted are stated by Judge Lochren in the following language:

The principles that govern this case are pretty well settled. Of course, there are some differences in the language used by different judges in such cases, arising more from the varying circumstances than from any real difference in the apprehension of what the law is governing cases of this kind.

The acts here charged constitute an interference with interstate commerce, and I suppose some matters are stated mainly to show that it is a case over which a Federal court has jurisdiction. As Congress has exclusive jurisdiction over commerce among the States and with foreign countries, it is therefore the duty of the Federal courts to safeguard the exercise of interstate commerce, and to see that it has protection under the law.

Now, there is no question but that an employee may leave the service of his employer without incurring liability to be required by a

court of equity to continue in the service, even if he has contracted to serve for a stated length of time. A breach of such contract may give a right of action at law, but performance will not be enforced in equity. A party may leave the service of his employer, and in the same way an employer may discharge a servant for cause or without cause. (When a servant leaves, or an employer discharges a servant, the connection of the servant with the service ceases, and this is especially so when the employee leaves of his own accord. He has the right to do so if he demands higher wages, and the demands are not complied with by the employer. He may leave, but if he does he has no right to insist upon reemployment, or to take means to compel the employer to take him back at higher wages; he has no further interest in the service.) Whomsoever the employer may engage afterwards to perform the service is a matter of no concern to the former servant, and he has no right to interfere in the matter any longer. He has left the service, and the only way he can return to it is by making a new contract with the employer, who may receive him back or not, as he sees fit. He has no right to do unlawful acts, or to interfere with the business or property of the employer, to coerce or compel the employer to reinstate him or to accord him higher wages.

The right of laborers to consult together and form unions, if they please, for the purpose of their own advancement and for the obtaining of higher wages, is conceded; and, I suppose, employers have the same right to form unions for the purpose of depressing wages, if they shall see fit to do so. It is a voluntary matter on the one side as well as on the other. The employee has no more right to coerce the employer to give him employment at a rate which he shall name than an employer has to coerce a servant to work at such a rate as he shall determine and dictate.

As this case stands, these individual defendants are not in the employment of the complainants. They have no interest in the complainants' business, and they have no right to interfere with that business in any way. The testimony shows that they are interfering; they admit it themselves. They admit it to the extent that they have been placing "pickets," as they call them, to observe who is employed, and for the purpose of inducing such employees to leave the employment of the complainants.

Fellow-workmen may agree together to leave at once the service of their employer; but having done so, and being no longer interested in that matter, then, notwithstanding certain dicta in cases that have been read from, it does not seem clear to me that they are acting lawfully when they are persuading the servants of their former employer to break their contracts and leave the service. It is a matter that does not concern them any longer. It is a matter that is apparently injurious to their former employer. It seems to me that such an interference in a matter with which they have no rightful concern and which is injurious to another is not lawful.

But, whether it be so or not, it appears in this case, without any dispute, that there have been some unlawful acts, respecting which some of these defendants pleaded guilty to an indictment charging them with such unlawful acts in matters complained of here. The affidavits of police officers and others also show that there have been assaults and threats made by defendants who have been employed by the complainants in this work against new employees, and that these matters have

been continued, and there have been some such occurrences since the issuing of this injunctional order.

It seems to me that this injunction must be allowed, and I think that it may fairly extend to any interference, not only with the employees of the complainants, while they are at work and in places where they are performing service, but also to interference with them by pickets, and in other ways of waylaying and meddling with them while going to and returning from their work, and especially restraining assaults of any kind by force or violence, or intimidation by threats of force or violence.

INJUNCTION—TRADE SECRETS—DISCLOSURE BY EMPLOYEE—*Stone et al. v. Goss et al.*, *Court of Errors and Appeals of New Jersey*, 55 *Atlantic Reporter*, page 736.—This is a bill for an injunction to restrain John Goss from divulging a secret process of the complainants, his former employers, for the manufacture of compounds used to remove hair or wool from skins and hides, and also to restrain the Grasselli Chemical Company from using or divulging any information derived from Goss with reference to such secret process. Goss had been in the employment of the complainants for several years, during which time they had manufactured and put upon the market what was called "Stone's XXX Depilatory" and "Stone's XXXX Depilatory." The Grasselli Chemical Company were rivals in the business of such manufactures and had induced Goss to leave his position with Stone and enter their service. Goss informed his new employers of the complainants' method of manufacture and described their apparatus so that they were able to reproduce the same and put a similar depilatory on the market. They were proceeding with preparations to do this when an injunction was secured in the court of chancery stopping such an undertaking. An appeal was taken to the court of errors and appeals, in which the decree of the court of chancery was affirmed. Stone alleged that Goss was under contract not to reveal the secrets of the manufacture, which contract Goss denied. The weight of the evidence, however, was held to establish the existence of the contract.

The conclusions of law are presented in the following syllabus by the court:

1. One who is under an express contract, or a contract implied from a confidential relation, not to disclose a trade secret, will be enjoined from disclosing the same.

2. Others who induce him to disclose the secret, knowing of his contract not to disclose it, or knowing that his disclosure is in violation of the confidence reposed in him, will be enjoined from making any use of the information so obtained, although they might have reached the same result independently by their own experiments or efforts.

3. The disclosure necessarily made to the court does not deprive the complainants of their right to an injunction.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1896.

[The Second Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1896. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

CONNECTICUT.

ACTS OF 1903.

CHAPTER 33.—*Free public employment offices.*

The commissioner of the bureau of labor statistics may establish and conduct branch public employment bureaus under the direction and control of the five established bureaus. Such branches may be established and conducted in any city within the State and shall be managed by the nearest bureau: *Provided*, That in no case shall such a branch be established unless it can be conducted by the bureau taking charge thereof upon the appropriation made for such bureau.

Approved, April 14, 1903.

CHAPTER 95.—*Exemption of wages, etc., from execution.*

SECTION 1. So much of any debt which has accrued by reason of the personal services of the defendant as shall not exceed twenty-five dollars, including wages due for the personal services of any minor child, shall be exempted and not liable to be taken by foreign attachment or execution; but there shall be no exemption of any debt accrued by reason of the personal services of the defendant against a claim for the defendant's personal board. All benefits allowed by any association of persons in this State towards the support of any of its members incapacitated by sickness or infirmity from attending to his usual business shall also be exempted and not liable to be taken by foreign attachment or execution; and all moneys due the debtor from any insurance company upon policies issued for insurance upon property, either real or personal, which is exempt from attachment and execution, shall in like manner be exempted to the same extent as the property so insured.

Approved, May 15, 1903.

CHAPTER 97.—*Inspector of factories, etc.*

SECTION 1. The governor shall, with the consent of the senate, on or before the fifteenth day of May, A. D. 1903, and before the first day of May quadrennially thereafter, appoint a factory inspector, who shall hold office for four years and until his successor is appointed and qualified. The governor may remove the inspector for cause. Said factory inspector shall receive an annual salary of twenty-five hundred dollars and necessary expenses.

SEC. 2. The inspector shall examine all elevators, whether in factories, mercantile establishments, storehouses, workhouses, dwellings, or other buildings, and may order hoistways, hatchways, elevator wells, and well holes to be protected by trapdoors, self-closing hatches, safety catches, or other safeguards as will insure the safety of all persons therein. Due diligence shall be used to keep such trapdoors closed at all times, except when in actual use by an occupant of the building having the use and control of the same. All elevator cabs or cars, whether used for freight or passengers, shall be provided with some suitable mechanical device, if considered necessary by said inspector, whereby the cab or car will be securely held in the event of accident to the shipper rope or hoisting machinery, or from any similar cause, and said mechanical device shall at all times be kept in good working order.

SEC. 3. The inspector may from time to time appoint deputies to assist him in the performance of his duties. Such deputies shall have the same power and authority as the inspector, subject to his approval. Each of said deputies shall receive a compensation of five dollars per day for actual services, and his necessary expenses incident to the performance of the duties of his office. The total amount expended under this section shall not exceed in any one year seven thousand dollars, which shall be paid upon proper vouchers by the deputies, signed by the inspector.

Approved, May 12, 1903.

CHAPTER 149.—*Right of action for personal injuries—Limitation.*

Section 1119 of the general statutes is hereby amended to read as follows: No action to recover damages for injury to the person, or for an injury to personal property caused by negligence, shall be brought but within one year from the date of the injury or neglect complained of.

Approved, June 9, 1903.

CHAPTER 193.—*Right of action for injuries causing death.*

SECTION 1. No cause or right of action shall be lost or destroyed by the death of any person, but shall survive in favor of or against the executor or administrator of such deceased person.

SEC. 4. In all actions surviving to or brought by an executor or administrator for injuries resulting in death, whether instantaneous or otherwise, such executor or administrator may recover from the party legally in fault for such injuries just damages not exceeding five thousand dollars: *Provided*, That no action shall be brought upon this statute but within one year from the neglect complained of.

SEC. 5. All damages recovered under this act shall be distributed as directed in section 399 of the general statutes.

Approved, June 18, 1903.

DELAWARE.

ACTS OF 1903.

CHAPTER 410.—*Hours of labor on public works—City of Wilmington.*

SECTION 1. Eight hours shall constitute a legal day's work for all classes of employees employed by the municipal corporation of the city of Wilmington.

SEC. 2. Each contract to which the municipal corporation of the city of Wilmington is a party which may involve the employment of laborers, workmen or mechanics shall contain a stipulation that no laborer, workman or mechanic in the employ of the municipal corporation of the city of Wilmington, contractor, subcontractor, or other person doing or contracting to do the whole or a part of the work contemplated by the contract shall be required to work more than eight hours in any one calendar day, except in cases of extraordinary emergency caused by fire, flood or danger to life or property.

SEC. 3. The wages to be paid for a legal day's work as hereinbefore defined to all classes of such laborers, workmen or mechanics, upon all such public work or upon any material to be used upon or in connection therewith shall not be less than the prevailing rate for a day's work in the same trade or occupation in the locality in the State where such public work, on, about or in connection with which such labor is performed in its final or completed form is to be situated, erected or used. Each such contract hereafter made shall contain a stipulation that each such laborer, workman or mechanic employed by such contractor, subcontractor or other person on, about or upon such public work shall receive such wages as hereinbefore provided. Each contract for such public work hereafter made shall contain a provision that the same shall be void and of no effect unless the person or corporation making or performing the same shall comply with the provisions of this act; and no such person or corporation shall be entitled to receive any sum nor shall any officer, agent or employee of the municipal corporation of the city of Wilmington pay the same or authorize its payment from the funds under his charge or control to any such person or corporation for work done upon any contract which in its form or manner of performance violates the provisions of this act.

SEC. 4. Any officer, agent or employee of the municipal corporation, of the city of Wilmington, having a duty to act in the premises, who violates, evades, or knowingly permits the violation of [or] evasion of any of the provisions of this act, shall

be guilty of malfeasance in office and shall be suspended or removed by the authority having the power to appoint or remove such officer, agent or employee, otherwise by the governor. Any citizen of this State may maintain proceedings for the suspension or removal of such officer, agent or employee or may maintain an action for the purpose of securing the cancellation or avoidance of any public contract which by its terms or manner of performance violates this act or for the purpose of preventing any officer, agent or employee of such municipal corporation from paying or authorizing the payment of any public money for work done thereupon.

SEC. 5. This act shall not apply to the policemen, park guards, watchmen, or special officers of any kind.

Approved, April 7, A. D. 1903.

INDIANA.

ACTS OF 1903.

CHAPTER 16.—*Convict labor.*

SECTION 1. Section four (4) of an act entitled "An act concerning the employment of the convicts of the State prison," [etc.] * * * approved February 10, 1899, * * * is hereby amended to read as follows: Section 4. No contract for the labor of the convicts of said prison shall be made for a longer period than up to October 1st, 1910. Such contracts, whether made for the labor of said convicts, or on the piece price system, shall be awarded to the highest and best bidder for the same. The regular hours for the day's work in said prison shall not exceed eight hours, subject to temporary changes under necessity, or to fit special cases, to be sanctioned by the board of control.

Approved, February 14, 1903.

CHAPTER 21.—*Inspection of steamboats.*

SECTION 1. After the passage and taking effect of this act it shall be the duty of every and all owners of any steamboat, naphtha or gas engine launch that is used for carrying passengers, freight, baggage or merchandise of any kind for hire, upon any of the inland lakes, ponds or rivers of this State, to have the boiler, engine and machinery belonging to the motive power of such steamboat or launch carefully inspected once each year by some competent inspector and engineer who shall hold a certificate of competency from some reputable technical school or institute of the United States, this inspection to be not later than the 15th day of May: *Provided*, That if the services of an inspector of the class above mentioned can not be reasonably obtained to make such inspection, the owner or person engaged in running such steamboat or launch required by this act to be inspected, may have such inspection made by any reputable engineer or machinist qualified to make the same, not of kin to nor in the employment of such owner or person running such boat: *Provided, further*, That before any person shall make such inspection he shall have a certificate of authority from the State factory inspector authorizing such inspection, and shall send a copy of his report of each inspection made by him to the State factory inspector, which report shall be filed and carefully preserved by the State factory inspector in his office.

SEC. 2. Upon making inspection of any boat or launch required by this act to be inspected, the inspector shall, if he finds the boiler, engine and machinery connected with the motive power safe and in good order, issue to the owner or person using the same, a certificate and commission substantially in the following form: "I, (name) hereby certify that I did on the — day of —, 19—, carefully make personal inspection of the boiler, engine and the other machinery connected with the motive power of the steamboat (or launch) (name) owned by (name) and operated by (name), and I find that such boiler, engine and machinery are safe, sound and in good condition, and said (name) is hereby commissioned to use and run such boat (name) for the purpose of carrying passengers, freight, baggage and merchandise for hire until the — day of August, 19—, (or until the close of the present season of the last inspection). Signed, (inspector's full name)." The owner or operator of such boat or launch shall post such certificate and commission in a conspicuous place upon his boat or launch and keep the same so posted at all times the boat or launch is being run and used for hire.

SEC. 3. If upon such inspection the boiler, engine or machinery of any boat or launch, or any part thereof, is found to be unsafe, unfit or dangerous for use, the inspector shall not issue such certificate, but he shall state in writing wherein such engine, boiler or machinery is defective and unsafe, and he shall post such writing

in some conspicuous place on the boat or launch, which shall be kept so posted until the defective part or parts are repaired and made safe for use and a certificate and commission to run and use the boat or launch is duly issued by the inspector. Any person who shall remove, mutilate or destroy any certificate of inspection that any such engine, boiler or machinery is defective, posted by any inspector upon any such steamboat, naphtha or gas engine launch, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than twenty-five (\$25) dollars nor more than fifty (\$50) dollars.

Sec. 4. Such inspector may charge and collect from the owner or person using and running such steamboats and launches for hire, the sum of \$10 for each inspection of any steamboat of six horse power or over, and \$5 for each inspection of any naphtha or gas engine launch of three horse power or over, and the charge shall be a lien upon the boat or launch so inspected, which lien may be enforced and collected in the same manner as mechanics' liens, in any court of competent jurisdiction, to be collected without relief from valuation or appraisal laws, and a reasonable attorney fee may be recovered in such case in favor of the plaintiff.

Sec. 5. Any inspector who shall knowingly issue a certificate of safety and commission to run, for any steamboat or launch inspected by him, when the boiler, engine and machinery thereof are not safe and in good condition, shall be deemed guilty of a grave misdemeanor, and upon conviction thereof shall be fined in any sum not less than \$50, and not more than \$500, and upon a second conviction for such offense, imprisonment not exceeding six months in the county jail may be added in the discretion of the court or jury trying the case.

Sec. 6. Any person owning, using, operating or running any steamboat, naphtha or gas engine launch for the carriage of passengers, freight, baggage or merchandise of any kind for hire, after the passage and taking effect of this act, without having had the boiler, engine and machinery of steamboat or launch inspected as provided in the first section of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than twenty nor more than one hundred dollars therefor, and upon a second conviction for such an offense, imprisonment in the county jail not exceeding six months may be added in the discretion of the court or jury trying the case, and the several justices' courts of this State shall have jurisdiction to inflict imprisonment in the cases tried in such courts.

Approved, February 21, 1903.

CHAPTER 46. *Hours of labor of employees on railroads.*

SECTION 1. It shall be unlawful for any superintendent, train dispatcher, yardmaster, foreman or other railway official to permit, exact, demand or require any engineer, fireman, conductor, brakeman, switchman or other employee, engaged in the movement of passenger or freight trains, or in switching service in yards or railway stations, to remain on duty more than sixteen (16) consecutive hours, unless in case of accident, wreck or other unavoidable cause, without at least eight hours' rest and relief from all duty whatever.

Sec. 2. For any violation of or failure to comply with any of the provisions of this act, such company shall be liable to all persons and employees injured by reason thereof; and no employee shall in any case be held to have assumed the risk incurred by reason of such violation or failure.

Sec. 3. Any superintendent, train dispatcher, train-master, foreman or other official of any railway in the State of Indiana, violating any of the provisions of this act, shall upon conviction thereof be fined not less than twenty (\$20) dollars and not more than two hundred (\$200) dollars for each offense.

Approved, February 28, 1903.

CHAPTER 78.—*Protection of employees on buildings.*

SECTION 1. It shall be unlawful for any person, firm or corporation engaged in the erection of any building, three stories in height or more, to begin in the erecting of the third story, or any story above the third story, until a floor or protection has been put down on the second story, and a floor or protection shall likewise be put down for the third story before the fourth story is commenced, and so on successively. A floor or protection shall be put down on the last story erected before beginning work on the walls or materials for the next story above. Such floor or floors shall be made of material fitted together sufficiently close to prevent persons, materials or substances of any kind, falling from above, from going through the same, and such floor or floors shall be sufficiently secure as to prevent their tipping up or giving away under a person or persons walking over same. The floors above referred to shall be embodied in the specifications and fully described by the architect or owner.

Sec. 2. If any firm, person or corporation use or cause to be used any elevating machines or hoisting apparatus in the construction or building of any building or other structure for the purpose of lifting or elevating materials to be used in such construction, such firm, person or corporation engaged in constructing such building, shall cause the shafts or openings in each floor to be enclosed or fenced in on all sides by a barrier of suitable material at least four feet high.

Sec. 3. Any person or corporation violating any of the provisions of this act shall be fined not less than twenty-five dollars nor more than one hundred dollars.

Sec. 4. The bureau of factory inspection is hereby required to enforce the provisions of this law.

Approved, March 3, 1903.

CHAPTER 120.—*Safety appliances on railroads.*

SECTION 1. From and after the first day of January, 1904, it shall be unlawful for any person, firm, company or corporation engaged in commerce by railroad from one point to another in this State to use on its line any locomotive engine from one point in the State to another point in the State unless such locomotive is equipped with proper driving wheel brake and appliances for operating the train brake system, or using any train in such traffic after said date that has not a sufficient number of cars in it so equipped with power or train brakes that the engineer on the locomotive drawing such train can not control its speed without requiring trainmen to use the common hand brake for that purpose.

Sec. 2. On and after the first day of January, 1904, it shall be unlawful for any such person, firm, company, or corporation to haul or permit to be hauled, or used on its line, any car used in moving traffic from one point within this State to another point within this State, not equipped with couplers, coupling automatically, by impact, and which can be uncoupled without the necessity of men going between the ends of the cars.

Sec. 3. When any person, firm, company or corporation engaged in commerce within this State by railroad shall have equipped a sufficient number of its cars so as to comply with the provisions of section one of this act it may lawfully refuse to receive from any connecting lines of road or shippers any cars not equipped sufficiently in accordance with the first section of this act, with such power or train brakes as will work and readily interchange with the brakes in use on its own cars, as required by this act.

Sec. 4. From and after the first day of January, 1904, it shall be unlawful for any person, firm, company or corporation operating any railroad, to use any car in any commerce wholly within this State, that is not provided with secure grab irons or hand holds on each side of the coupler at both ends of the car, and on each side of the car at each end of such car.

Sec. 5. Any such person, firm, company or corporation using any locomotive engine, running any train, or hauling or permitting to be hauled or used on its line, any car in violation of any of the provisions of this act, shall be liable to a penalty of \$10 for each and every such violation, to be recovered in a suit to be brought by the prosecuting attorney in any court in this State having jurisdiction in the locality where such violation shall have been committed; and it shall be the duty of such prosecuting attorney to bring such suits upon duly verified information of such violation having occurred: *Provided*, That nothing in this act contained shall apply to trains composed of four wheel cars.

Sec. 6. Any employee of any such person, firm, company or corporation so engaged in operating a railroad within this State, who may be injured by any locomotive, car or train in use contrary to the provisions of this act, shall not be deemed to have assumed the risk occasioned thereby, although continuing in the employment of such person, firm, company or corporation after the unlawful use of such locomotive, car or train has been brought to his knowledge.

Approved, March 9, 1903.

CHAPTER 171.—*Payment of wages in scrip.*

SECTION 1. Whenever any person, firm, company or corporation or association shall take from any employee, laborer or other person rendering services for hire in the State, an assignment of such employee's, laborer's or other person's wages, earned or unearned, due or to become due, or shall take from such employee, laborer or other person rendering service for hire, any order on his employer for any such wages, and shall issue to give to any such employee, laborer or other person rendering service for hire, in consideration of or in payment for any such assignment or transfer or order, any check or any ticket, token or device payable or redeemable or purporting

to be payable or redeemable or agreed to be payable or redeemable in goods, ware[re], merchandise or any other commodity or anything other than lawful money of the United States, such checks, tickets, tokens or device shall at once become due and payable in lawful money of the United States, for and to the extent of the full amount of the wages assigned or relinquished for it, and the employee, laborer or other person to whom such check, ticket, token or device for such assignment or relinquishment of wages, shall, after demand, have the right to collect same with reasonable attorney's fees, by suit in any court of competent jurisdiction. Nothing in this act shall be construed to prevent any firm, person, company, corporation or association from paying such employee, laborer or other person rendering service for hire by bank check on any solvent bank: *Provided*, Such bank check is payable upon demand at its face value.

Approved, March 9, 1903.

CHAPTER 222.—*Fire escapes on factories, etc.*

SECTION 1. * * * Every building in which persons are employed above the second story in a factory, workshop or mercantile or other establishment, * * * and every factory, workshop, mercantile or other establishment of more than two stories in height shall be provided with proper ways of egress or means of escape from fire, sufficient for the use of all persons accommodated, assembled, employed, lodged or residing in such building, and such ways of egress and means of escape shall be kept free from obstruction, in good repair and ready for use at all times, and all rooms above the second story in such building shall be provided with more than one way of egress or escape from fire, placed as near as practicable at opposite ends of the room and leading to fire escapes on the outside of such buildings or to stairways on the inside, provided with proper railings. All external doors subject to the provisions of this section shall open outward, and all windows open outward or upward. * * * The certificate of the chief inspector of the department of inspection of the State shall be prima facie evidence of a compliance with such requirements.

SEC. 2. In addition to the foregoing means of escape from fire, all such buildings as are enumerated in section 1 of this act, as are more than two stories in height, shall have one or more fire escapes on the outside of said buildings, as may be directed by the chief inspector aforesaid, except in such cases as the said chief inspector may deem such fire escapes to be unnecessary in consequence of adequate provision having been already made for safety in event of fire, and in such cases of exemption the said chief inspector shall give the owner, lessee or occupant of said building a written certificate to that effect and his reason therefor, and such fire escapes as are provided for in this section shall be constructed according to specifications issued or approved by the department of inspection and shall be connected with each floor above the first, well fastened and secured, and of sufficient strength; each of which fire escapes shall have landings or balconies guarded by iron railings not less than three feet in height, and embracing one or more windows at each story, and connecting with the interior by easily accessible and unobstructed openings; and the balconies or landings shall be connected by iron stairs, placed at a slant of not more than forty-five degrees, protected by a well secured handrail on both sides, with a twelve-inch wide drop ladder from the lower platform, reaching to the ground, except in cases of school buildings, iron stairs shall extend to a ground landing, and no telegraph, telephone, electric light poles or wires, signs or other obstructions shall interfere with the construction and use of any fire escape.

SEC. 3. Any other plan or style of fire escape shall be sufficient if approved by the chief inspector, but if not so approved the chief inspector may notify the owner, proprietor or lessee of such establishment or of the building in which such establishment is conducted, or the agent or superintendent, or school officer, or either of them, in writing, that any such plan or style of fire escape is not sufficient, and may, by an order in writing, served in like manner, require one or more fire escapes, as he shall deem necessary and sufficient, to be provided for such establishment at such location and [of] such plan and style as shall be specified in such written order. Within twenty days after the service of such order the number of fire escapes required in such order for such establishment shall be provided therefor, each of which shall be of the plan and style in accordance with the specifications in said order required. The windows or doors to each fire escape shall be of sufficient size and be located, as far as possible, consistent with accessibility from the stairways and elevator hatchways or openings, and the ladder thereof shall extend to the roof. Stationary stairs or ladders shall be provided on the inside of such establishment from the upper story to the roof, as a means of escape in case of fire.

SEC. 6. The owner or owners of any building designated in this act, whether individual, firm or corporation, or the lessee or occupant thereof, or any school officer

having charge of public property, who neglects or refuses to comply with any of the provisions of this act, shall be fined not exceeding two hundred dollars, and be deemed guilty of a misdemeanor punishable by imprisonment for not less than one month nor more than two months; and in case of fire occurring in said building or buildings in the absence of such fire escape or escapes, the said person or persons, or corporation or public officials shall be liable in an action for damages with a penalty of five thousand dollars for the life of each person killed, in case of death, or for damages for personal injuries sustained in consequence of such fire breaking out in said building, and shall also be deemed guilty of a misdemeanor punishable by imprisonment for not less than six months nor more than twelve months in the county jail; and such action for damages may be maintained by any person now authorized by law to sue as in other cases of similar injuries: *Provided*, That nothing in this act shall interfere with fire escapes now in use approved by the chief inspector.

SEC. 7. The chief inspector of the department of inspection of the State is hereby charged with the enforcement of this act, and shall see that its provisions are observed and enforced, and for this purpose he or his deputies shall have free access at all reasonable hours to all buildings embraced herein, and the prosecuting attorney in each county of the State shall render all necessary legal assistance as may be required by said chief inspector in enforcing this act.

Approved, March 10, 1903.

CHAPTER 246.—*Inspection of steam boilers.*

SECTION 1. It shall be the duty of every person, firm or corporation owning or using or causing to be used any steam boiler for generating steam to be applied to machinery in all industrial institutions subject to inspection by the department of inspection, shall [sic] provide them with a full complement of gauge-cocks, some visible means of indicating the water level, one steam gauge, one fusible plug properly inserted, one safety valve, all to be kept in good working order (the area of said valve, if known as a pop-valve, shall be in the ratio of one square inch of area to three square feet of grate surface), a lever and ball safety valve in the ratio of one square inch of area to two square feet of grate surface: *Provided*, That fusible plugs shall be required only in boilers having crown sheets.

SEC. 2. The owner, agent, manager, or lessee of any boiler or boilers described in section 1 of this act, of 10 or more horse power, shall cause such boiler or boilers to be inspected, internally, once in six months by a practical boilermaker of not less than five years' experience; or a practical steam engineer who has had not less than ten years' experience with steam boilers carrying not less than seventy (70) pounds pressure per square inch; or by a boiler inspector of any company doing business under the laws of the State, who shall furnish to the owner, agent, or lessee of such boiler a certificate of inspection stating the kind and showing the condition of said boiler, the connections, and maximum pressure to be carried by said boiler; such certificate to be retained in the office of said establishment and to be shown to the chief inspector of the department of inspection or his deputy when required.

SEC. 3. Every boiler house in which a boiler, or nest, or battery of boilers is placed shall be provided with a steam gauge or gauges, properly connected with the boilers, and where the engine is in a separate room, or more than forty feet distant from the gauge or nearest boiler, shall have another gauge attached to the steam pipe, so the engineer can readily ascertain the pressure carried. The safety valves of steam boilers subject to inspection under this act shall be loaded to sustain only the maximum pressure allowed by said certificate of inspection.

SEC. 4. The prosecuting attorney of any county of this State is hereby required upon request of the chief inspector of the department of inspection, his deputy or any other person of full age, to commence and prosecute to a termination before any court of competent jurisdiction, in the name of the State, actions or proceedings against any person, firm or corporation reported to him to have violated the provisions of this act.

SEC. 5. It shall be unlawful for any person, firm or corporation to knowingly operate any afore-said boilers except as provided for in this act, and for the violation of section 1 or 3 a fine of not less than ten dollars (\$10) nor more than twenty-five dollars (\$25) shall be assessed for each offense. Each day such violation or violations continue shall constitute a separate offense. Any person, firm or corporation knowingly failing to comply with section 2 of this act, or any order issued by the department of inspection in accordance therewith, shall be fined not less than twenty-five dollars (\$25) nor more than one hundred dollars (\$100).

Approved, March 12, 1903.

MAINE.**ACTS OF 1903.****CHAPTER 114.—Employment offices.**

SECTION 1. Section six of chapter three of the public laws of eighteen hundred ninety-nine is hereby amended * * * so that said section shall read as follows:

Section 6. The municipal officers of any town may on payment of the sum of five dollars each into the town treasury grant licenses to suitable persons for one year, unless sooner revoked after notice and for cause, to keep offices for the purposes of obtaining employment for domestics, servants, or other laborers, except seamen, or of giving information relating thereto, or of doing the usual business of intelligence offices; whoever keeps such an office, without a license, forfeits not exceeding fifty dollars for every day that it is so kept. The keeper of an intelligence office shall not retain any sum of money received from any person seeking employment through the agency of such intelligence office, unless employment of the kind sought for is actually furnished.

No license shall be granted to a person who is directly or indirectly engaged in or interested in the sale of intoxicating liquors. The keeper of a licensed intelligence office shall cause two copies of this act, printed in type of sufficient size to be legible and easily read, to be conspicuously posted in each room used or occupied for the purposes of such intelligence office. Whoever violates the provisions of this act shall have the license revoked, and shall be punished by fine not exceeding twenty dollars for each offense.

Approved, March 19, 1903.

MASSACHUSETTS.**ACTS OF 1903.****CHAPTER 275.—Registration of badges, etc., of labor organizations.**

SECTION 1. The registration of the insignia, distinctive ribbons, or membership rosette or button of a labor union indicated in chapter four hundred and thirty of the acts of the year nineteen hundred and two shall be made in the office of the secretary of the Commonwealth in accordance with the provisions of sections seven and eight of chapter seventy-two of the Revised Laws.

SEC. 2. Any such insignia, distinctive ribbons, or membership rosettes or buttons heretofore registered under the provisions of said chapter four hundred and thirty of the acts of the year nineteen hundred and two shall be deemed to have been fully registered within the meaning of said act if such registration has been in accordance with the requirements of sections seven and eight of said chapter seventy-two of the Revised Laws.

Approved, April 29, 1903.

CHAPTER 320.—Appointment, discharge, etc., of employees of public service corporations.

SECTION 1. No railroad, street railway, electric light, gas, telegraph, telephone, water or steamboat company shall appoint, promote, reinstate, suspend or discharge any person employed or seeking employment by any such company at the request of the governor, lieutenant governor, or any member or member elect of the council or of the general court, or candidate therefor, justice of the supreme judicial court, justice of the superior court, judge of probate, justice of a police, district or municipal court, district attorney, member or member elect of a board of county commissioners, or candidate for county commissioner, member or member elect of a board of aldermen, or selectmen, or city council, or any executive, administrative or judicial officer, clerk or employee of any branch of the government of the Commonwealth or of any county, city or town; nor shall any such public officer or body, or any member or member elect thereof or candidate therefor, directly or indirectly advocate, oppose, or otherwise interfere in, or make any request, recommendation, endorsement, requirement or certificate relative to, and the same, if made, shall not be required as a condition precedent to, or be in any way regarded or permitted to influence or control, the appointment, promotion, reinstatement or retention of any person employed or seeking employment by any such corporation, and no such person shall solicit, obtain, exhibit, or otherwise make use of any such official request, recommendation, certificate or endorsement in connection with any existing or desired employment by a public service corporation.

SEC. 2. The offices of probation officer, notary public and justice of the peace shall not be considered public offices within the meaning of this act.

Sec. 3. Any person or corporation violating the provisions of this act shall be punished by a fine of not less than fifty dollars nor more than one hundred dollars for each offense.

Approved, May 5, 1903.

CHAPTER 437.—*Liability of stockholders of corporations for wage debts.*

SECTION 33. * * * The stockholders of a corporation shall also be liable for all money due to operatives for services rendered within six months before demand made upon the corporation and its neglect or refusal to make such payment. A stockholder who pays on a judgment or otherwise more than his proportion of any such debt shall have a claim for contribution against the other stockholders.

Approved, June 17, 1903.

CHAPTER 475.—*Inspection of factories—Blowers for emery wheels, etc.*

SECTION 1. Any person, firm or corporation operating a factory or workshop in which emery wheels or belts or buffing wheels or belts injurious to the health of employees are used shall, within three months after this act takes effect, provide such wheels and belts with a hood or hopper connected with suction pipes, and with fans or blowers, in accordance with the provisions hereinafter contained, which apparatus shall be placed and operated in such a manner as to protect any person or persons using any such wheel or belt from the particles or dust produced by the operation thereof, and to convey the said particles or dust either outside of the building or to some receptacle so placed as to receive and confine the said particles or dust.

Sec. 2. Every such wheel shall be fitted with a sheet iron or cast iron hood or hopper of such form and so placed that the particles or dust produced by the operation of the wheel or of any belt connected therewith shall fall or will be thrown into such hood or hopper by centrifugal force; and the fans or blowers aforesaid shall be of such size and shall be run at such speed as will produce a volume and velocity of air in the suction and discharge pipes sufficient effectually to convey all particles or dust from the hood or hopper through the suction pipes and so outside of the building or to a receptacle as aforesaid.

Sec. 3. The suction pipes and connections shall be suitable and efficacious, and such as shall be approved by the district police.

Sec. 4. This act shall not apply to grinding machines upon which water is used at the point of grinding contact, nor to solid emery wheels used in saw mills or in planing mills or in other wood-working establishments, nor to any emery wheel six inches and under in diameter used in establishments where the principal business is not emery wheel grinding.

Sec. 5. It shall be the duty of the district police and of factory inspectors, upon receiving notice in writing, signed by any person having knowledge of the facts, that any factory or workshop as aforesaid is not provided with the apparatus herein prescribed, to visit such factory or workshop and inspect the same, and for that purpose they are hereby authorized to enter any such factory or workshop during working hours; and if they ascertain, in the foregoing or in any other manner, that the owner, proprietor or manager of any such factory or workshop has failed to comply with the provisions of this act, they shall make complaint of the same in writing, before a court or judge having jurisdiction, and cause such owner, proprietor or manager to be proceeded against for violation of this act; and it is made the duty of the district attorney to prosecute all cases arising under this act.

Sec. 6. Any person failing to comply with any provision of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty-five nor more than one hundred dollars, and in case of a second offense he shall be punished by the aforesaid fine, or by imprisonment in the county jail for a term not exceeding sixty days, or by both such fine and imprisonment.

Approved, June 26, 1903.

NORTH CAROLINA.

ACTS OF 1903.

CHAPTER 247.—*Emigrant agents.*

SECTION 26. Taxes in this schedule [Schedule B] shall be imposed as license tax for the privilege of carrying on the business or doing the act named, * * *. The license issued under this schedule shall be for twelve months, and shall expire on the thirty-first day of May of each year.

SEC. 74. On every emigrant agent or person engaged in procuring laborers for employment out of this State, an annual license tax of one hundred dollars for the State and one hundred dollars for the county for each county in which such agent or person does business, the same to be collected by the sheriff. Any one engaging in this business without first paying said tax shall be guilty of a misdemeanor and fined not less than two hundred dollars or imprisoned, in the discretion of the court.

Ratified this 9th day of March, A. D. 1903.

CHAPTER 473.—*Employment of children—Age limit—Hours of labor.*

SECTION 1. No child under twelve years of age shall be employed or work in any factory or manufacturing establishment within this State: *Provided*, This act shall not apply to oyster canning and packing manufactories in this State, where said canning and packing manufactories pay for opening or shucking oysters by the gallon or bushel.

SEC. 2. Not exceeding sixty-six hours shall constitute a week's work in all factories and manufacturing establishments of this State, and no person under 18 years of age shall be required to work in such factories or establishments a longer period than sixty-six hours in one week: *Provided*, That this section shall not apply to engineers, firemen, machinists, superintendents, overseers, section and yard hands, office men, watchmen or repairers of break-downs.

SEC. 3. All parents, or persons standing in relation of parent, upon hiring their children to any factory or manufacturing establishment, shall furnish such establishment a written statement of the age of such child or children being so hired, and any such parent, or person standing in the relation of parent to such child or children, who shall in such written statement misstate the age of such child or children being so employed, shall be guilty of a misdemeanor, and upon conviction shall be punished at the discretion of the court. Any mill owner, superintendent or other person acting in behalf of a factory or manufacturing establishment who shall knowingly or willfully violate the provisions of this act shall be guilty of a misdemeanor, and upon conviction shall be punished at the discretion of the court.

SEC. 4. This act shall be in force from and after January 1st, 1904.

Ratified this 6th of March, A. D. 1903.

CHAPTER 516.—*Licensing of employees on oyster boats.*

SECTION 6. It shall be unlawful for any person to catch oysters from the public grounds of the State without first obtaining a license so to do, and no person shall be licensed for this purpose who is not a bona fide resident of this State and who has not continuously resided therein for two years next preceding the date of his application for license, and it shall be unlawful for any person, licensed under the provisions of this act to employ as agent, or assistant any person not so licensed, or to act as the agent or assistant of any person unlicensed.

Ratified this 6th day of March, 1903.

PHILIPPINE ISLANDS.

LAWS OF U. S. PHILIPPINE COMMISSION—1902.

ACT No. 296.—Bureau of public printing—Skilled workmen to be employed.

SECTION 2. There shall be a chief of the bureau of public printing, * * * who shall be known as the public printer.

The duties of the public printer shall be:

4. To employ workmen who are thoroughly skilled in their respective branches of industry as shown by trial of their skill under his direction, in accordance with the provisions of the Civil Service Act.

LEADING ARTICLES IN PAST NUMBERS OF THE BULLETIN.

- No. 1. Private and public debt in the United States, by George K. Holmes.
Employer and employee under the common law, by V. H. Olmsted and S. D. Fessenden.
- No. 2. The poor colonies of Holland, by J. Howard Gore, Ph. D.
The industrial revolution in Japan, by William Eleroy Curtis.
Notes concerning the money of the U. S. and other countries, by W. C. Hunt.
The wealth and receipts and expenses of the U. S., by W. M. Steuart.
- No. 3. Industrial communities: Coal Mining Co. of Anzin, by W. F. Willoughby.
- No. 4. Industrial communities: Coal Mining Co. of Blanzy, by W. F. Willoughby.
The sweating system, by Henry White.
- No. 5. Convict labor.
Industrial communities: Krupp Iron and Steel Works, by W. F. Willoughby.
- No. 6. Industrial communities: Familistère Society of Guise, by W. F. Willoughby.
Cooperative distribution, by Edward W. Bemis, Ph. D.
- No. 7. Industrial communities: Various communities, by W. F. Willoughby.
Rates of wages paid under public and private contract, by Ethelbert Stewart.
- No. 8. Conciliation and arbitration in the boot and shoe industry, by T. A. Carroll.
Railway relief departments, by Emory R. Johnson, Ph. D.
- No. 9. The padrone system and padrone banks, by John Koren.
The Dutch Society for General Welfare, by J. Howard Gore, Ph. D.
- No. 10. Condition of the Negro in various cities.
Building and loan associations.
- No. 11. Workers at gainful occupations at censuses of 1870, 1880, and 1890, by W. C. Hunt.
Public baths in Europe, by Edward Mussey Hartwell, Ph. D., M. D.
- No. 12. The inspection of factories and workshops in the U. S., by W. F. Willoughby.
Mutual rights and duties of parents and children, guardianship, etc., under the law, by F. J. Stimson.
The municipal or cooperative restaurant of Grenoble, France, by C. O. Ward.
- No. 13. The anthracite mine laborers, by G. O. Virtue, Ph. D.
- No. 14. The Negroes of Farmville, Va.: A social study, by W. E. B. Du Bois, Ph. D.
Incomes, wages, and rents in Montreal, by Herbert Brown Ames, B. A.
- No. 15. Boarding homes and clubs for working women, by Mary S. Fergusson.
The trade-union label, by John Graham Brooks.
- No. 16. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
- No. 17. Brotherhood relief and insurance of railway employees, by E. R. Johnson, Ph. D.
The nations of Antwerp, by J. Howard Gore, Ph. D.
- No. 18. Wages in the United States and Europe, 1870 to 1898.
- No. 19. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
Mutual relief and benefit associations in the printing trade, by W. S. Waudby.
- No. 20. Condition of railway labor in Europe, by Walter E. Weyl, Ph. D.
- No. 21. Pawnbroking in Europe and the United States, by W. R. Patterson, Ph. D.
- No. 22. Benefit features of American trade unions, by Edward W. Bemis, Ph. D.
The Negro in the black belt: Some social sketches, by W. E. B. Du Bois, Ph. D.
Wages in Lyon, France, 1870 to 1896.
- No. 23. Attitude of women's clubs, etc., toward social economics, by Ellen M. Henriotin.
The production of paper and pulp in the U. S. from Jan. 1 to June 30, 1898.
- No. 24. Statistics of cities.
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- No. 28. Voluntary conciliation and arbitration in Great Britain, by J. B. McPherson.
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- No. 29. Trusts and industrial combinations, by J. W. Jenks, Ph. D.
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- No. 31. Betterment of industrial conditions, by V. H. Olmsted.
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- No. 32. Accidents to labor as regulated by law in the U. S., by W. F. Willoughby.
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The Negroes of Sandy Spring, Md.: A social study, by W. T. Thom, Ph. D.
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- No. 33. Foreign labor laws: Australasia and Canada, by W. F. Willoughby.
The British conspiracy and protection of property act and its operation, by A. M. Low.
- No. 34. Labor conditions in Porto Rico, by Azel Ames, M. D.
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- No. 35. Cooperative communities in the United States, by Rev. Alexander Kent.
The Negro landholder of Georgia, by W. E. B. Du Bois, Ph. D.
- No. 36. Statistics of cities.
Statistics of Honolulu, H. I.
- No. 37. Railway employees in the United States, by Samuel McCune Lindsay, Ph. D.
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- No. 46. Report of Anthracite Coal Strike Commission.
- No. 47. Report of the Commissioner of Labor on Hawaii.
- No. 48. Farm colonies of the Salvation Army, by Commander Booth Tucker.
The Negroes of Xenia, Ohio, by Richard B. Wright, jr., B. D.
- No. 49. Cost of living.
Labor conditions in New Zealand, by Victor S. Clark, Ph. D.

DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE

BUREAU OF LABOR.

No. 51—MARCH, 1904.

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ASSOCIATE EDITORS,
G. W. W. HANGER,
CHAS. H. VERRILL, G. A. WEBER.

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BULLETIN
OF THE
BUREAU OF LABOR.

No. 51.

WASHINGTON.

MARCH, 1904.

COURSE OF WHOLESALE PRICES, 1890 TO 1903.

In Bulletin No. 39, the issue for March, 1902, data relating to wholesale prices for the period from 1890 to 1901 were presented, and in Bulletin No. 45, the issue for March, 1903, this compilation was continued for the year 1902. In this Bulletin are presented the actual prices for 1903, and the relative prices for the fourteen years from 1890 to 1903.

As was explained in Bulletin No. 45, changes in the actual prices of single commodities may readily be seen by the inspection of a series of quotations covering a number of years, but in order to ascertain the changes in the general price level from year to year, the quotations for a number of commodities of a more or less dissimilar character must be examined and in some manner combined. The method quite generally adopted for this purpose by statisticians and economists is the use of what is commonly known as the index number or relative price.

Before proceeding to the discussion of the data which enter into the present record, it seems desirable to define the index number or relative price, and explain the various methods adopted in securing the same.

Briefly, an index number or relative price of any given article at any given date is the percentage which the price of that article at that date is of the price of the same article at a date or a period which has been selected as a base or standard. This base or standard varies in the different series of index numbers which have been presented to the public. In the London Economist's index numbers the average price for the years 1845 to 1850, inclusive, is taken as the base; in those calculated by Mr. Sauerbeck, and published in the Journal of the Royal

Statistical Society, the average for the eleven years 1867 to 1877 is taken; in Doctor Soetbeer's index numbers the average for the four years 1847 to 1850 is used, while in the United States Senate Finance Committee's statement of relative prices (Senate Report No. 1394, Fifty-second Congress, second session) the price for the year 1860 is taken as the base or standard. In order to secure the index number or relative price for any article at any date in the period covered, the price of the article for that date is divided by the price at the date or by the average price for the period selected as the base. The quotient obtained multiplied by 100 is the per cent that the price at that date is of the base or standard price, and is called the index number or relative price. For example, the percentage for flour in 1885 in Mr. Sauerbeck's series of index numbers is 63, meaning that the average price of flour in 1885 was 63 per cent of the average price of the same article during the base period (1867 to 1877). This base being always 100, a fall of 37 per cent is indicated.

These percentages having been made in the case of each separate article included in the particular scheme under consideration, and for each year of the period covered, a series of total index numbers or relative prices for each of the years covered is usually constructed by adding together the index numbers of all the articles for each year and dividing the result by the number of articles considered, thus securing an average of the same. This course has been followed by Sauerbeck, Soetbeer, the United States Senate Finance Committee, and some others. In the case of the London Economist index numbers, however, simply the sum of the index numbers of the individual articles is used. For example, the total of the index numbers for the base period (1845 to 1850) is 2,200, or the sum of the base figures (100) for the 22 articles considered, and the total of the percentages for 1873 is 2,947. These sums, however, may be readily reduced to the average form given in other series of index numbers by dividing each by 22, the number of articles considered. It will be seen, then, that the index numbers or relative prices for all the commodities combined do not represent averages of the actual prices of such dissimilar commodities as a loaf of bread, a pound of meat, a ton of pig iron, etc., but are averages of the index numbers or relative prices of the articles.

In the Bulletin for March, 1902 (No. 39), a history of the principal price indexes—those published by the London Economist, Palgrave, Sauerbeck, Soetbeer, the United States Senate Finance Committee, Commons, and Dun—was presented and need not be repeated here.

In the record of prices for the fourteen years from 1890 to 1903 published by the Bureau of Labor 250 series of quotations were secured for the entire period and an additional 11 for some portion of the period. No quotations are shown for imported tin plate since 1898, which leaves 260 series of quotations for the years 1890 to 1903.

Although in the case of commodities of great importance more than one series of quotations have been used, in no case has an article of a particular description been represented by more than one series of quotations. For this reason the terms "series of quotations" and "commodities" have been used interchangeably in the pages which follow. The actual prices from which the index numbers or relative prices, 1890 to 1901, were computed were shown in Table I, Bulletin 39, in detail; those from which the relative prices for 1902 were computed were shown in detail in Table I, Bulletin 45, and those from which the relative prices for 1903 were computed are shown in detail in Table I in this Bulletin. In securing these prices the effort has been made to include staple commodities only. In a number of instances it was found possible to secure prices for the same commodities that were included in the Report on Wholesale Prices, Wages, and Transportation submitted by Mr. Aldrich from the Senate Committee on Finance March 3, 1893. Many articles which were included in that report are no longer manufactured, or, if still manufactured, have ceased to be important factors in the market. On the other hand, a number of articles not shown in that report have become of such importance as to render necessary their inclusion in any study of the course of prices.

The commodities covered in 1903 by the 260 series of quotations have been classified under 9 general groups, as follows:

- Farm products, 16 series of quotations.
- Food, etc., 54 series of quotations.
- Cloths and clothing, 76 series of quotations.
- Fuel and lighting, 13 series of quotations.
- Metals and implements, 38 series of quotations.
- Lumber and building materials, 27 series of quotations.
- Drugs and chemicals, 9 series of quotations.
- House furnishing goods, 14 series of quotations.
- Miscellaneous, 13 series of quotations.

The further description of the kind of prices quoted, the source of these quotations, the market for which they were secured, their frequency, etc., will be taken up in connection with the discussion of Table I, which follows:

Table I.—Wholesale prices of commodities in 1903, pages 270 to 319.—This table shows in detail the actual prices from which the subsequent tables of index numbers are calculated. As stated previously, the 260 series of quotations have been classified under 9 groups of commodities, and this grouping has been uniformly adhered to in the several tables which are given.

The prices quoted in every instance are wholesale prices. Wholesale prices have invariably been used in compilations which have been made for the purpose of showing changes in the general price level. They are more sensitive than retail prices and more quickly reflect

changes in conditions. Retail prices usually follow the wholesale, but not generally in the same proportion. The margin between them in the case of some commodities is so great that slight changes in the wholesale price do not affect the retail. Changes in the wholesale price which last for a short time only do not usually result in corresponding changes in the retail price.

The net cash prices are shown for textiles and all articles whose list prices are subject to large and varying discounts. In the case of a number of articles, such as white pine, nails, etc., however, whose prices are subject to a small discount for cash no deduction has been made.

The prices have been collected from the best available sources, such as standard trade journals, officials of boards of trade, chambers of commerce, and produce exchanges, and leading manufacturers or their selling agents.

The prices quoted are usually the prices in the New York market, except for such articles as have their primary market in some other locality. For grains, livestock, etc., for example, Chicago prices are quoted; for fish, except salmon, Boston prices; for tar, Wilmington, N. C., prices; for white pine, Buffalo prices; for Elgin creamery butter, Elgin, Ill., prices, etc. The prices for textiles are the prices in the general distributing markets, such as New York, Boston, and Philadelphia; and where no market is mentioned in the prefatory note to Table I, it should be understood that the prices are for the general market.

The following table shows the different markets and the number of articles quoted for each market:

NUMBER OF COMMODITIES OR SERIES OF QUOTATIONS IN 1908, CLASSIFIED BY MARKETS FOR WHICH SECURED.

Market.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	Total.
New York	2	44	2	9	21	21	9	6	12	126
Chicago	14	5			1					20
Factory, mine, wells, etc.				3	1	1		3		8
Pittsburg					7					7
Buffalo						4				4
Philadelphia					4					4
Boston		3								3
Trenton, N. J.								3		3
Cincinnati				1	1					2
Eastern markets (Balt., Boston, N. Y., Phila.) ..			2							2
Elgin, Ill.		1								1
LaSalle, Ill.					1					1
Peoria, Ill.									1	1
Washington, D. C.		1								1
Wilmington, N. C.						1				1
General market			72		2			2		76
Total	16	54	76	13	38	27	9	14	13	280

As regards the description of the commodity, it should be stated that the greatest care has been taken to secure prices throughout the

period for a commodity of precisely the same description. Changes in quality are, of course, reflected in prices, and for this reason note has been made of any important changes which have occurred. In the case of certain commodities, such as butter, eggs, etc., prices for the best quality have invariably been taken, in order to avoid frequent changes in grade. It should also be stated in this connection that in the case of commodities for which prices were secured from the Oil, Paint, and Drug Reporter the lowest quotations were invariably taken where a range of prices was found because of the fact that these represent the prices of large lots, while the high quotations represent the prices of smaller lots.

Weekly quotations have been secured in the case of all articles which are subject to frequent fluctuations in price, such as butter, cheese, eggs, grain, live stock, meats, etc. In the case of articles whose prices are more stable, monthly or annual quotations have been taken. The following table shows the number of series of weekly, monthly, and annual price quotations:

NUMBER OF COMMODITIES OR SERIES OF QUOTATIONS, CLASSIFIED AS TO THEIR FREQUENCY OF QUOTATION IN 1903.

Frequency of quotation.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House-furnishing goods.	Miscellaneous.	Total.
Weekly.....	13	22	1	1					1	38
Monthly.....	3	32	64	12	38	27	9	14	12	211
Annually.....		11	11							11
Total.....	16	54	76	13	38	27	9	14	13	260

The character of each series of quotations as regards frequency is shown in all cases in Table I in a prefatory note which states fully the date of the quotations and, if weekly, whether the quotations are for some particular day of the week, the average for the week, or the range for the week. The majority of the weekly quotations show the price on Tuesday, and if for any reason Tuesday's price was not obtainable, the first price in the week has been taken. The quotations from trade and other journals, when credited to the first of each month, are not in all instances the price for the exact day stated, as it is a common practice of the daily papers which make a specialty of market reports to devote certain days to the review of the market of certain articles. For example, the Boston Herald quotes fish on Saturday only. The prices are, however, the earliest prices quoted in the journal to which the article is credited. It should also be stated that the monthly prices credited to weekly publications are the earliest quotations shown in such publications for each month.

The average price for the year was obtained by dividing the sum of the quotations for a given commodity by the number of quotations shown. For example, the sum of the Tuesdays' prices of cotton for

1903 (shown in Table I) was \$5.8420, and the number of quotations 52. The former figure divided by the latter gives \$0.11235 as the average price for the year. Where a range was shown the mean price for each date was found, and this was used in computing the yearly average. The average yearly price of all articles was computed as above described. The reader will understand that, in order to secure for any commodity a strictly scientific average price for the year, one must know the quantity marketed and the price for which each unit of quantity was sold. It is manifestly impossible to secure such detail, and even were it possible the work of compilation would be much greater than the results would justify. It is believed that the method adopted here, which is also that used in the construction of other index numbers, secures results which are quite as valuable for all practical purposes.

An examination of Table I in the present Bulletin, in connection with Table I in Bulletin Nos. 39 and 45, shows that the prices of some of the commodities included in these index numbers were subject to frequent and decided fluctuations, while the prices of others were almost, and in two cases altogether, uniform throughout the period. The following table shows the lowest and highest quotations and the dates of the same for each of the commodities during the fourteen-year period:

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903.

[For a more detailed description of the articles see Table I, page 270 et seq.]

FARM PRODUCTS.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Barley: by sample.....	3d week Aug 1896	\$0.181 - \$0.35	4th week Oct 1890	\$0.68 - \$0.81	Bushel
Cattle: steers, choice to extra.	4th week Apr 1896	3.85 - 4.25	3d, 4th Tues Aug, 1st Tues Sept 1902	7.60 - 9.00	100 lbs
Cattle: steers, good to choice.	2d Tues Jan 1890	3.00 - 3.90	2d, 3d, 4th Tues Aug, 1st, 2d Tues Sept 1902	6.70 - 7.60	100 lbs
Corn: No. 2, cash.....	2d Tues Sept 1896	.191 - .20	5th Tues May 1892	.484 - 1.00	Bushel
Cotton: upland, middling..	1st Tues Feb, 1st, 2d Tues Nov 1898	.064	5th Tues Dec 1903	.1370	Pound
Flaxseed: No. 1.....	Sept 1896.....	.631 - .64	July 1901.....	1.88	Bushel
Hay: timothy, No. 1.....	3d, 4th Tues July 1898	6.50 - 8.00	3d Tues Apr 1891	15.50 - 16.50	Ton
Hides: green, salted, packers, heavy native steers.	June 1894.....	.0500 - .0613	Sept 1902.....	.1491	Pound
Hogs: heavy.....	4th Tues July 1896	2.50 - 3.15	2d Tues Feb 1893	8.10 - 8.65	100 lbs
Hogs: light.....	3d Tues Sept 1896	2.80 - 3.35	2d Tues Feb 1893	7.90 - 8.25	100 lbs
Hops: N. Y. State, choice..	Sept 1896.....	.06 - .07	Nov 1890.....	.45 - .47	Pound
Oats: cash.....	2d Tues Sept 1896	.142	4th Tues July 1902	.634 - .64	Bushel
Rye: No. 2, cash.....	5th Tues June 1896	.291	3d Tues Aug 1891	.97 - 1.00	Bushel
Sheep: native.....	5th Tues Oct 1894	.75 - 3.25	4th Tues Mar 1903	4.50 - 7.00	100 lbs
Sheep: Western.....	5th Tues Aug 1898	1.00 - 3.00	5th Tues Mar 1903	3.50 - 7.00	100 lbs
Wheat: contract grades, cash.	5th Tues Jan 1895	.484 - .494	2d Tues May 1898	1.73 - 1.85	Bushel

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903—(Continued.)

[For a more detailed description of the articles see Table I, page 270 et seq.]

FOOD, ETC.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Beans: medium, choice.....	Apr 1897.....	\$0.85	Sept 1901.....	\$2.75	Bushel
Bread: crackers, Boston X.	May, June 1897.	.05	June 1898, July 1900 to July 1903.	.08	Pound
Bread: crackers, soda.....	May to Dec 1897.	.05½	June 1898.....	.08½	Pound
Bread: loaf (Wash. market)	May to July 1895	.03	Aug 1896.....	.06	Loaf
Bread: loaf, homemade (N. Y. market).	Jan to May 1896.	.03	Jan 1890 to Dec 1895, Jan 1896 to Dec 1903.	.04	Loaf
Bread: loaf, Vienna (N. Y. market).	Jan to May 1896.	.03	Jan 1890 to Dec 1895, June 1896 to Dec 1903.	.04	Loaf
Butter: creamery, Elgin (Elgin market):	1st Mon June 1890.	\$0.13½ - .14	1st Mon Mar 1891.	\$0.34 - .35½	Pound
Butter: creamery, extra (N. Y. market):	2d Tues June 1890.	.13½ - .14	2d Tues Mar 1891.	.35 - .36½	Pound
Butter: dairy, N. Y. State.....	3d Tues Apr 1896	.13 - .13½	2d Tues Mar 1891.	.33	Pound
Cheese: N. Y. State, full cream.	3d Tues May 1895.	.06 - .06½	4th Tues Mar to 4th Tues Apr 1903.	.14½ - .14½	Pound
Coffee: Rio No. 7.....	May, June, Aug, Sept 1903.	.05½ - .05½	Oct 1890.....	.18½ - .19	Pound
Eggs: new-laid, fancy, near-by.	1st Tues Apr 1897	.10½ - .10½	4th, 5th Tues Dec 1903.	.36 - .45	Dozen
Fish: cod, dry, bank, large.	Mar to Sept 1896, Aug 1897.	4.00 - 4.25	Feb, Mar 1892.....	7.75 - 8.00	Quintal
Fish: herring, shore, round.	May to Aug 1892.	2.00 - 2.25	Dec 1902 to Sept 1903.	5.75 - 6.00	Barrel
Fish: mackerel, salt, large No. 8.	June 1897.....	8.00 - 9.00	Sept, Oct 1890.....	20.00	Barrel
Fish: salmon, canned.....	Apr 1898.....	1.10 - 1.30	Mar 1890.....	1.75 - 2.00	12 cans
Flour: buckwheat.....	Apr 1897.....	1.00 - 1.15	Sept 1891.....	3.50 - 3.65	100 lbs
Flour: rye.....	July 1897.....	2.00 - 2.40	Nov 1891.....	5.15 - 5.90	Barrel
Flour: wheat, spring patents.	1st Tues Nov 1894	3.15 - 3.40	2d Tues May 1898.	7.00 - 7.75	Barrel
Flour: wheat, winter straights.	2d Tues Oct to 1st Tues Nov 1894.	2.40 - 2.65	2d Tues May 1898.	6.25 - 6.75	Barrel
Fruit: apples, evaporated, choice.	Apr 1897.....	.03½ - .03½	Feb 1891.....	.11½ - .15½	Pound
Fruit: apples, sun-dried, Southern, sliced.	May 1897.....	.01½ - .02½	May 1891.....	.11 - .13	Pound
Fruit: currants, in barrels.	Apr, May 1894.....	.01½ - .01½	Oct 1900.....	.12 - .12½	Pound
Fruit: prunes, California, in boxes.	June 1897.....	.04 - .04½	Oct 1890.....	.12½ - .13	Pound
Fruit: raisins, California, London layer.	Apr 1896.....	.80 - .90	Jan 1890.....	2.25 - 2.75	Box
Glucose: 41° and 42° mixing.	June 1897.....	.92½	June 1902.....	2.32	100 lbs
Lard: prime contract.....	4th Tues July 1896.	.0340	3d Tues Feb 1893.	.1315	Pound
Meal: corn, fine white.....	Sept 1896.....	.63 - .65	May 1891.....	1.69	100 lbs
Meal: corn, fine yellow.....	Sept 1896.....	.62 - .63	May 1891.....	1.67 - 1.68	100 lbs
Meat: bacon, short clear sides.	4th Tues July, 1st Tues Aug 1896.	.04 - .04½	3d, 4th Tues Oct 1902.	.12½ - .12½	Pound
Meat: bacon, short rib sides.	4th Tues July, 1st Tues Aug, all Sept 1896.	.03½ - .04	4th Tues May 1893, 3d, 4th Tues Oct 1902.	.12 - .12½	Pound
Meat: beef, fresh, native sides.	4th Tues Mar 1894.	.05 - .07	2d, 3d, 4th, 5th Tues July 1902.	.09 - .12½	Pound
Meat: beef, salt, extra mess.	2d, 3d, 4th weeks Aug 1892.	6.00 - 6.50	3d week May to 2d week June 1902.	14.00	Barrel
Meat: beef, salt, hams, Western.	4th Tues Oct 1890, 2d Tues Nov 1891, 3d Tues Oct 1892.	12.00 - 12.50	1st Tues Aug 1899.	27.50 - 29.00	Barrel
Meat: hams, smoked.....	3d, 4th Tues Sept, 1st Tues Oct 1898.	.07½ - .07½	4th, 5th Tues Jan 1893.	.15 - .16	Pound
Meat: mutton, dressed.....	5th Tues Oct 1895.	.03 - .06	1st, 2d Tues May 1891, 4th Tues May 1892.	.10½ - .12	Pound
Meat: pork, salt, mess, old to new.	4th Tues July, 3d Tues Sept 1896.	7.50 - 8.00	5th Tues May 1893.	21.50 - 22.50	Barrel
Milk: fresh.....	June 1897, June 1898.	.0175	Dec 1902.....	.0375	Quart

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

FOOD, ETC.—Concluded.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Molasses: New Orleans, open kettle, prime.	June, July 1897.	\$0.23 - \$0.24	Jan to July 1900.	\$0.44 - \$0.55	Gallon
Rice: domestic, choice.....	May, July, Aug, Sept 1893.	.04 - .04½	Aug to Nov 1891	.06½ - .07	Pound
Salt: American.....	8d week Aug 1896 to 3d week Feb 1897, 1st, 2d, 3d weeks Oct 1898, 1st week May to 5th week Sept 1899, 1st week June to 2d week July 1903.	.55	1st week Nov 1900 to 1st week Apr 1901.	1.15	Barrel
Salt: Ashton's.....	Oct 1894 to Mar 1901.	2.00 - 2.10	Jan to July 1890	2.45 - 2.50	Bushel
Soda: bicarbonate of, American.	Oct, Nov 1901, June to Aug 1902.	.0095	Apr 1890, Mar to June 1891.	.0350	Pound
Spices: nutmegs.....	Aug to Oct 1902.	.18½ - .19½	Mar 1890.....	.64 - .65	Pound
Spices: pepper, Singapore.....	Feb 1896, Jan, Feb 1896.	.04½ - .04½	Nov 1900.....	.13½ - .13½	Pound
Starch: pure corn.....	July 1901.....	.04	Nov, Dec 1890.....	.06½	Pound
Sugar: 89° fair refining.....	4th Thurs Apr, 1st Thurs May 1894.	.02310	1st, 2d Thurs Sept, 2d, 3d, 4th Thurs Oct 1890.	.05311	Pound
Sugar: 96° centrifugal.....	1st Thurs Jan, 3d Thurs Apr, 4th Thurs May 1894.	.02750	1st, 2d Thurs Sept 1890.	.05921	Pound
Sugar: granulated.....	1st, 2d Thurs Feb 1896.	.03680	1st Thurs June 1890.	.06615 - .06676	Pound
Tallow.....	4th Tues May 1897.	.02½ - .03	3d Tues Feb 1893	.08½	Pound
Tea: Formosa, fine.....	Oct 1903.....	.20 - .21	Sept 1890.....	.33 - .35	Pound
Vegetables, fresh: onions.....	May 1896.....	.50 - 1.00	Feb 1890.....	5.00 - 10.00	Barrel
Vegetables, fresh: potatoes, Burbank.	3d week May, 3d, 4th weeks June 1896.	.10 - .15	2d week June 1891.	1.10 - 1.35	Bushel
Vinegar: cider, Monarch.....	Oct 1895 to Sept 1896, July 1900 to Sept 1901, Nov 1902 to Dec 1903.	.13	Nov 1890 to May 1892.	.18	Gallon

CLOTHS AND CLOTHING.

Bags: 2 bushel, Amoskeag..	Jan to Mar 1896.	\$0.10½	Jan 1900.....	\$0.16½	Bag
Blankets: 11-4, 5 lbs. to the pair, all wool.	1896 to 1897.....	.75	1903.....	.92½	Pound
Blankets: 11-4, 5 lbs. to the pair, cotton warp, all wool filling.	1896.....	.54	1900.....	.75	Pound
Blankets: 11-4, 5 lbs. to the pair, cotton warp, cotton and wool filling.	1896, 1896.....	.40	1900.....	.52½	Pound
Boots and shoes: men's brogans, split.	Jan to June 1896.	.90	Jan 1890 to June 1892, July to Sept 1896.	1.05	Pair
Boots and shoes: men's calf bal. shoes, Goodyear welt, dongola top.	July 1896 to Dec 1900.	2.24	Jan 1890 to June 1898.	2.40	Pair
Boots and shoes: men's split boots, kip top, 16-in., ½ double sole. (a)	Jan to Dec 1896.	15.00	Oct to Dec 1901...	19.00	12 pairs
Boots and shoes: men's vici kid shoes, Goodyear welt.	Jan 1897 to Dec 1903.	2.00	Jan 1890 to Dec 1894.	2.50	Pair
Boots and shoes: women's solid grain shoes, leather, polish or polka.	Jan 1896 to Dec 1894.	.75	Jan to July 1900	.925	Pair
Broadcloths: first quality, black, 54-in., made from XXX wool.	Jan 1896 to Dec 1896.	1.38	Jan 1890 to Dec 1893.	1.97	Yard

*In 1903, russet bound top, 17-inch, ½ double sole.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

CLOTHS AND CLOTHING—Continued.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Calico: Cocheco prints	Jan 1898 to June 1899.	\$0.045	Jan to Dec 1890, Jan 1892 to June 1893.	\$0.065	Yard
Carpets: Brussels, 5-frame, Bigelow.	Jan 1894 to June 1897.	.936	Jan 1891 to Mar 1892.	1.128	Yard
Carpets: Ingrain, 2-ply, Lowell.	July 1895 to June 1897.	.408	Jan to Dec 1891.	.552	Yard
Carpets: Wilton, 5-frame, Bigelow.	Jan 1895 to June 1897.	1.680	May to Dec 1903.	2.040	Yard
Cotton flannels: 2½ yds. to the pound.	Jan 1897 to Dec 1898.	.06½	Jan 1890 to Dec 1891.	.08½	Yard
Cotton flannels: 3½ yds. to the pound.	Jan to Dec 1898	.04½	Jan 1890 to Dec 1891, Dec 1903.	.06½	Yard
Cotton thread: 6-cord, 200-yd. spools, J. & P. Coats.	July 1896 to Dec 1899.	.030503	Jan 1900 to Dec 1903.	.037240	Spool
Cotton yarns: carded, white, mule-spun, North-ern, cones, 10-l.	Dec 1898 to June 1899.	.13½	Aug 1903.	.21	Pound
Cotton yarns: carded, white, mule-spun, North-ern, cones, 22-l.	Dec 1898 to Mar 1899.	.16½	July 1892	.24	Pound
Denims: Amoskeag	Jan to Mar 1899.	.08½	Oct to Dec 1890, July to Dec 1893, Nov, Dec 1903.	.12	Yard
Drillings: brown, Pepper-ell.	Nov 1898 to Jan 1899.	.04½	Aug, Sept, Nov, Dec 1890, Feb, Mar 1891.	.07	Yard
Drillings: 30-in., Stark A.	Feb 1898	.0410	Aug 1890.	.0675	Yard
Flannels: white, 4-4, Bal-lard Vale No. 3.	Aug, Sept 1896	.29	July to Dec 1903.	.44½	Yard
Ginghams: Amoskeag	Apr to June 1895, July to Sept 1896, Apr to Sept 1897, Jan to Mar, July to Dec 1898.	.0425	Jan 1891 to Mar 1893.	.0650	Yard
Ginghams: Lancaster	Feb to May 1895, June to Aug 1895.	.04½	May 1890 to Mar 1893.	.07	Yard
Horse blankets: 6 lbs. each, all wool.	1896	.52	1900	.68	Pound
Hosiery: men's cotton half hose, seamless, fast black, 26 to 22 oz., 160 needles.	1901	.6860	1890	1.2740	12 pairs
Hosiery: men's cotton half hose, seamless, standard quality, 84 needles.	1899	.62½	1890, 1891	.97½	12 pairs
Hosiery: women's combed Egyptian cotton hose, high spliced heel, double sole, full-fashioned.	1899	1.75	1901	2.00	12 pairs
Hosiery: women's cotton hose, seamless, fast black, 26 to 28 oz., 160 to 176 needles.	1901	.6615	1890	1.2250	12 pairs
Leather: harness, oak, country middles, 14 lbs. and up (except over-weights, 20 lbs. and up).	Aug, Sept 1891.	\$0.20 - .22	July to Nov 1895, Nov 1899 to Mar 1900.	\$0.32 - .34	Pound
Leather: harness, oak, "jacks" hides, heavy, No. 1. (b)	Sept 1902	.32	Aug 1903.	.31 - .39	Pound
Leather: sole, hemlock, nonacid, Buenos Ayres, middle weights, 1st qual-ity.	May 1892	.16	Apr, May 1900	.26 - .27	Pound
Leather: sole, oak	Sept to Nov 1896, June 1897.	.28 - .29	Mar 1903	.39 - .40	Pound
Leather: wax calf, 30 to 40 lbs. to the doz., B grade.	Jan to June 1890, Feb, June 1891, Aug 1894 to Jan 1896, Sept, Oct 1896, Apr, June 1897.	.55 - .60	July to Nov 1895.	.80 - .85	84 foot
Linen shoe thread: 10s, Barbour.	Jan to Dec 1903.	\$0.8460	Nov 1893 to Sept 1894.	\$0.9405	Pound

a Quotations for 1890 to 1901.

b Quotations for 1902 and 1903.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table 1, page 270 et seq.]

METALS AND IMPLEMENTS.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Augers: extra, 4-in	Oct 1894 to Apr 1896, Feb 1899.	\$0.1333	Jan to Dec 1903.	\$0.2310	Each
Axes: M. C. O., Yankee	Oct 1897 to Dec 1898.	.3750	Jan 1890 to Sept 1891.	.5650	Each
Bar iron: best refined, from mill (Pittsburg market).	July 1897	.0096	Oct 1899	.0260	Pound
Bar iron: best refined, from store (Philadelphia market).	Nov 1894, Jan, Feb 1896.	.0120	Sept 1899 to Jan 1900.	.0250	Pound
Barb wire: galvanized	Aug 1897.....	1.6500	Dec 1899 to Mar 1900.	4.1300	100 lbs
Butts: loose joint, cast, 3x3 inch.	Feb to July 1895, June 1897 to Jan 1900.	.0292	Feb to May 1900.	.0430	Pair
Chisels: extra, socket firmer, 1-inch.	Apr 1894 to Dec 1895, Dec 1896 to Nov 1896.	.1710	Jan to Dec 1903..	.2800	Each
Copper: ingot, lake	June 1894.....	\$0.0890-.0900	May 1899.....	.1925	Pound
Copper: sheet, hot-rolled (base sizes)	Jan, Apr 1896...	.134	July 1890.....	.25	Pound
Copper wire: bare.....	July 1894	.11	July, Oct 1890, Apr 1899.	.20	Pound
Doorknobs: steel, bronze plated.	Jan 1890 to Apr 1895, Mar 1896 to June 1900.	.1660	May to Dec 1902.	.2220	Pair
Files: 8-inch mill bastard ..	July 1896 to June 1897.	.77	Nov 1899 to Aug 1900.	1.10	Dozen
Hammers: Maydole No. 14.	Jan 1890 to Nov 1895.	.3500	Jan to Dec 1903.	.4660	Each
Lead: pig.....	Sept 1896	.0273-.0275	Oct 1890.....	\$0.0538-.0540	Pound
Lead pipe	Nov 1896 to Jan 1897.	3.60	Oct to Dec 1890..	6.40	100 lbs
Locks: common mortise....	Jan 1896 to Apr 1902.	.0750	Sept 1895 to June 1896, May 1902 to Dec 1903.	.0900	Each
Nails: cut, 8d., fence and common.	July to Sept 1896	1.15	May to Nov 1896.	2.90	100 lbs
Nails: wire, 8d., fence and common.	Dec 1896, Aug 1897, Aug, Dec 1898.	1.35	Jan, Feb 1890...	3.35- 3.40	100 lbs
Pig iron: Bessemer	July 1897	9.39	Dec 1899, Feb 1900.	25.00	Ton
Pig iron: foundry No. 1	July 1898	11.25	Nov 1899 to Jan 1900.	25.00	Ton
Pig iron: foundry No. 2	June 1897	9.40 - 9.50	Nov 1902.....	24.00-25.00	Ton
Pig iron: gray forge, Southern, coke.	May 1897.....	8.00	Jan 1903	20.75-21.25	Ton
Planes: Bailey No. 5.....	Mar 1895 to Dec 1899.	1.23	Jan to Dec 1903.	1.53	Each
Quicksilver.....	Jan to Mar 1894.	.45	Oct, Nov 1890...	.79	Pound
Saws: crosscut, Dinton	Uniform during period.	1.6038	Uniform during period.	1.6038	Each
Saws: hand, Dinton No. 7..	Jan 1891 to Dec 1903.	12.60	Jan to Dec 1890.	14.40	Dozen
Shovels: Ames No. 2	Jan 1894 to Mar 1896.	7.45	Apr to Nov 1902.	9.61	Dozen
Silver: bar, fine	Jan 1903	.48213	Aug 1890.....	1.16985	Ounce
Spelter: Western	Feb 1895	.0315-.0325	May 1899.....	.0696-.0700	Pound
Steel billets	May 1897.....	13.96	Sept, Oct 1899 ..	41.50	Ton
Steel rails	July, Nov 1898.	17.00	Jan 1890	35.25	Ton
Steel sheets: black, No. 27.	May 1897.....	.0180-.0185	Sept 1901.....	.0875	Pound
Tin: pig	Oct 1896	.1270	Mar 1900.....	.3425	Pound
Tin plates: domestic, Bessemer, coke, 14x20 inch.	Apr 1898	2.724 - 2.774	Dec 1899 to Sept 1900.	4.84	100 lbs
Tin plates: imported, Bessemer, coke, I. C., 14x20 inch. (a)	June to Aug 1896, Aug 1897	3.70	Apr, May 1893 ..	5.50	100 lbs
Trowels: M. C. O., brick, 10 1/2-in.	Uniform during period.	.34	Uniform during period.	.34	Each
Vices: solid box, 50-lb	July 1897 to Feb 1899.	3.28	Apr, May, Aug, Sept 1903.	5.75	Each
Wood screws: 1-in., No. 10, flat head.	Apr to Dec 1897.	.0800	Jan 1892 to Mar 1894.	.2100	Gross
Zinc: sheet	May 1894.....	3.56	June 1899	7.50	100 lbs

a Quotations for 1890 to 1894.

LOWEST AND HIGHEST QUOTATIONS, 1890 to 1903—Continued.

[For a more detailed description of the articles see Table 1, page 270 et seq.]

LUMBER AND BUILDING MATERIALS.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Brick: common domestic ..	Sept 1894, Sept 1900.	\$4.25	Feb to Apr 1890.	\$7.50	M
Carbonate of lead: American, in oil.	Feb 1894.....	.0488	Nov 1890 to Jan 1891.	.0683	Pound
Cement: Portland, domestic.	Mar to May 1902, Oct 1903.	\$1.60-1.90	Apr 1900.....	\$2.20-2.35	Barrel
Cement: Rosendale	Nov 1898.....	.60	Apr 1892.....	1.20-1.25	Barrel
Doors: pine	Last q 1896, 1st 3 qrs 1897.	.80	Aug to Dec 1902.	2.25	Door
Hemlock	Nov 1894 to Jan 1895.	10.75-11.25	Mar to May 1900.	18.00	M feet
Lime: common	Sept to Dec 1896, July to Sept 1900.	.60	Jan to July, Oct to Nov 1890, Sept 1891, Sept 1892 to Apr 1893, May 1898.	1.00	Barrel
Linseed oil: raw	Feb, July 1897 ..	.29	July, Aug 1901 ..	.82	Gallon
Maple: hard	June to Sept 1901	24.00-27.00	June to Dec 1903.	32.00-34.00	M feet
Oak: white, plain	June to Aug 1901	32.00-34.00	June to Dec 1903.	45.00-48.00	M feet
Oak: white, quartered	Jan, Feb 1890 ..	47.00-48.00	Dec 1903.....	80.00-85.00	M feet
Oxide of zinc	Jan to June 1896.	.0325	Jan to June 1900.	.0475	Pound
Pine: white, boards, No. 2 barn.	May 1897 to Jan 1899.	15.00-16.00	Apr 1902 to Dec 1903.	24.00	M feet
Pine: white, boards, uppers.	Jan to Nov 1890.	48.00-45.00	Oct 1902 to Dec 1903.	80.00	M feet
Pine: yellow	Jan to Apr 1896, June to Nov 1897.	15.50-16.00	Nov 1899 to May 1900.	21.00-23.00	M feet
Plate glass: polished, unsilvered, area 3 to 5 sq. feet.	1897.....	.20	1890.....	.53	Sq. foot
Plate glass: polished, unsilvered, area 5 to 10 sq. feet.	1897.....	.32	1890.....	.70	Sq. foot
Poplar	Sept 1897 to Jan 1899.	29.00-31.00	June to Dec 1903.	51.00-52.50	M feet
Putty	Apr to Dec 1903.	.0113	May 1902 to Mar 1903.	.0225	Pound
Resin: good, strained	Sept 1893.....	1.00	Nov 1903.....	2.75-2.80	Barrel
Shingles: cypress	Jan to Dec 1897 ..	2.35	Jan to Dec 1890 ..	3.35	M
Shingles: white pine, 16-inch. (a)	Jan to Mar 1902.	3.40	Apr 1902 to Dec 1903.	3.65	M
Shingles: white pine, 18-inch. (b)	Jan 1890	3.40-3.50	Apr to Dec 1901.	4.25	M
Spruce	July to Oct 1894.	11.50-12.50	Sept to Dec 1903.	19.50-21.50	M feet
Tar	Sept 1893, Dec 1893 to May 1894, Jan to Apr, June 1896, Apr 1898.	.90	Sept 1891.....	2.00	Barrel
Turpentine: spirits of	Aug, Sept 1896 ..	.24	Apr 1903.....	.67-.67½	Gallon
Window glass: American, single, firsts, 6x8 to 10x16 inch.	May to July 1896.	1.3894	Apr 1901.....	4.80	50 sq. ft.
Window glass: American, single, thirds, 6x8 to 10x16 inch.	July, Aug 1892 ..	1.2113	Apr 1901.....	3.8250	50 sq. ft.

DRUGS AND CHEMICALS.

Alcohol: grain, 94°	Jan to May 1890.	\$1.98	Dec 1901	\$2.53	Gallon
Alcohol: wood, refined, 96°.	Sept to Dec 1903.	.50	Feb to Sept 1898.	1.40	Gallon
Alum: lump	Dec 1891 to Feb 1892.	.0145	Jan to June 1890.	.0188	Pound
Brimstone: crude, seconds ..	Sept, Dec 1895, Feb, Mar 1896.	15.00	Apr 1891, May 1898.	35.00	Ton
Glycerin: refined	Aug 1894.....	.11½	Jan to Apr, June to Aug 1890.	.18	Pound
Muriatic acid: 20°	July 1895 to Dec 1896.	.0075	Nov 1901 to Apr 1902.	.0185	Pound
Opium: natural, in cases	Aug 1892.....	1.50	Aug 1898.....	3.75	Pound
Quinine: American	Feb to July 1897.	.15	Apr 1899.....	.40	Ounce
Sulphuric acid: 66°	Nov 1890 to Mar 1891, Apr to Aug, Oct, Nov 1894, Jan 1896 to Nov 1896.	.0070	Nov 1901 to Jan 1902.	.0140	Pound

a Quotations for 1902 and 1903.

b Quotations for 1890 to 1901.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1903—Concluded.

[For a more detailed description of the articles see Table I, page 270 et seq.]

HOUSE FURNISHING GOODS.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Earthenware: plates, cream-colored.	July 1896 to Dec 1897.	\$0.3807	Jan to Dec 1903.	\$0.4775	Dozen
Earthenware: plates, white granite.	July 1896 to Dec 1897.	.3991	Jan 1901 to Dec 1902.	.5096	Dozen
Earthenware: teacups and saucers, white granite.	July 1896 to Dec 1897.	3.0907	Jan 1901 to Dec 1902.	3.7632	Gross
Furniture: bedroom sets, ash.	Jan 1896 to Dec 1897.	8.75	Mar to Dec 1903.	12.25	Set
Furniture: chairs, bedroom, maple.	Jan 1897 to Sept 1898.	5.00	Jan to Dec 1900, Mar to Dec 1903.	8.00	Dozen
Furniture: chairs, kitchen.	Jan to Sept 1898.	3.25	Jan to Nov 1900.	5.25	Dozen
Furniture: tables, kitchen.	Jan 1896 to June 1899.	13.80	Dec 1899 to Dec 1903.	15.60	Dozen
Glassware: nappies, 4-in....	Jan 1896 to Dec 1900.	.10	Jan 1901 to Dec 1903.	.14	Dozen
Glassware: pitchers, 1-gallon, common.	Jan 1897 to Dec 1900.	1.00	Jan 1901 to Dec 1903.	1.30	Dozen
Glassware: tumblers, 1-pint, common.	Jan to Dec 1899.	.13	Jan to Dec 1891.	.20	Dozen
Table cutlery: carvers, stag handles.	1897 to 1901, Jan 1902 to Dec 1903.	.75	1893.....	.95	Pair
Table cutlery: knives and forks, cocobolo handles.	1897.....	5.00	1890, 1891.....	7.75	Gross
Wooden ware: pails, oak-grained.	Apr 1895 to Jan 1896, Feb to May 1896.	1.10	Oct to Dec 1903..	1.70	Dozen
Wooden ware: tubs, oak-grained.	Oct 1894 to Nov 1899.	1.25	Jan 1890 to Aug 1891.	1.65	Nest of 3

MISCELLANEOUS.

Cotton-seed meal.....	Feb 1895.....	\$16.00-\$17.00	Jan 1902.....	\$33.60	2,000 lbs
Cotton-seed oil: summer yellow, prime.	Nov, Dec 1897.....	.21½	Feb 1898.....	.61	Gallon
Jute: raw.....	Dec 1894, Mar, Apr, May 1896.	.02½ - .08½	Mar 1892.....	\$0.04½ - .06½	Pound
Malt: Western made.....	July 1897.....	.50 - .53	Apr to Aug 1891.	.95 - 1.00	Bushel
Paper: news.....	Oct 1899.....	.0175 - .0200	Jan 1890.....	.0375 - .0450	Pound
Paper: wrapping, manila.....	Apr 1898.....	.0875 - .0400	Sept 1898.....	.0600 - .0675	Pound
Proof spirits.....	1st wk Jan to 3d wk May 1890.	1.0800	1st wk Dec 1901 to 4th wk Jan 1902, 1st wk Sept to 3d wk Dec 1902.	1.3200	Gallon
Rope: manila, 1-in (s).....	Aug, Sept 1896, Sept, Oct 1897.	.0591	Dec 1899.....	.1576	Pound
Rubber: Para Island.....	Sept 1891.....	.60 - .63	Dec 1899, Apr 1900.	1.07 - 1.08	Pound
Soap: castile, mottled, pure.	May 1896 to Nov 1896, Mar 1897.	.05	Apr 1901 to Oct 1903.	.06½	Pound
Starch: laundry.....	Aug, Sept, Oct 1896.	.0275	Aug, Sept, Dec 1902, Jan 1903.	.0600	Pound
Tobacco: plug, Horseshoe..	July, Aug 1892, Oct 1896 to May 1897.	.35	Jan to July 1901.	.47	Pound
Tobacco: smoking, granulated, Seal of N. C.	Jan 1890 to June 1898.	.50	Oct 1902 to Dec 1903.	.57	Pound

s In 1903, 1/4-inch.

In a number of instances the lowest or highest price, as shown in the foregoing table, lasted for only a short time, in some cases but a few days or even a part of a day. The groups of farm products and food, etc., show the widest variations. Good to choice steers varied from \$3.00-\$3.90 on the second Tuesday of January, 1890, to \$6.70-\$7.60 on the last three Tuesdays of August and the first two Tuesdays

of September, 1902. Corn ranged from 19½–20 cents the second Tuesday of September, 1896, to \$0.48½–\$1.00 the fifth Tuesday of May, 1892, the high price being due to an attempt to corner corn in the Chicago market. The failure of those interested in the corner to take all corn offered at the high price, however, and the rumor that they had failed, resulted in a drop from \$1.00 to 48½ cents within a few hours. Cotton varied from 5¼¢ cents on the first Tuesday of February and the first and second Tuesdays of November, 1898, to 13¼¢ cents on the fifth Tuesday of December, 1903. Heavy hogs on the fourth Tuesday of July, 1896, were \$2.50–\$3.15 and on the second Tuesday of February, 1893, \$8.10–\$8.65. Hops ranged from 6–7 cents in September, 1895, to 45–47 cents in November, 1890. Oats ranged from 14½ cents on the second Tuesday of September, 1896, to 63½–64 cents on the fourth Tuesday of July, 1902. Native sheep ranged from \$0.75–\$3.25 on the fifth Tuesday of October, 1894, to \$4.50–\$7.00 on the fourth Tuesday of March, 1903. Western sheep show a similar range. Wheat ranged from 48½–49½ cents the fifth Tuesday of January, 1895, to \$1.73–\$1.85 the second Tuesday of May, 1898. The high price is said to have been due to an attempt to control the price of that commodity and also, to some extent, to the war with Spain and the fear of other foreign complications. The most marked variations in the food group are in fresh vegetables, onions having varied from \$0.50–\$1 in May, 1896, to \$5–\$10 in February, 1890, and potatoes from 10–15 cents the third week of May and the third and fourth weeks of June, 1896, to \$1.10–\$1.35 the second week of June, 1891. Currants and dried apples show wide variations. Eggs varied from 10¼–10½ cents the first Tuesday of April, 1897, to 36–45 cents the last two Tuesdays of December, 1903. Lard also shows a wide variation. Almost all the articles in the food group show wide variations, which may be seen by referring to the foregoing table. In the cloths and clothing group the variations are not so marked, as the price of many of the articles in this group depends more largely upon the cost of labor in producing them. Print cloths varied from 1.875 cents the second week of May, 1898, to 4.063 cents the second week of December, 1892. Of the raw materials in this group wool, medium fleece, scoured, varied from 29.03 cents in June, 1895, and June to September, 1896, to 62.10 cents in June, July, August, and November, 1890. In the fuel and lighting group Youghiogheny coal varied from 4½–4¾ cents (per bushel) in March and April, 1899, to 11 cents in November, 1891; coke from 92 cents in April and May, 1894, to \$3.25–\$4.25 in March and April, 1900; and petroleum, crude, from 51½ cents in October, 1892, to \$1.88½ in December, 1903. In the group of metals and implements best refined bar iron from mill varied from 0.95 cent (per pound) in July, 1897, to 2.60 cents in October, 1899;

barb wire from \$1.65 in August, 1897, to \$4.13 in December, 1899, to March, 1900; pig iron, foundry No. 2, from \$9.40-\$9.50 (per ton) in June, 1897, to \$24-\$25 in November, 1902; while bar silver varied from 48.213 cents in January, 1903, to \$1.16995 in August, 1890. In lumber and building materials Rosendale cement, doors, linseed oil, plate glass, resin, tar, turpentine, and window glass varied widely. In drugs and chemicals wood alcohol shows the greatest variation—from 50 cents in September to December, 1903, to \$1.40 in February to September, 1893. In house furnishing goods, kitchen chairs were \$3.25 (per dozen) from January to September, 1898, and \$5.25 from January to November, 1900. In the miscellaneous group cotton-seed meal, cotton-seed oil, news paper, and rope show wide variations.

Owing to the unusual method of fixing the scale of prices of cut and wire nails and the difficulties encountered in securing satisfactory quotations of prices, it was thought best to enter into a somewhat lengthy explanation in Bulletin No. 39, and the reader is referred to pages 226 to 231 of that number.

A copy of both the cut and wire nail cards now in use follows:

NATIONAL NAIL CARD SCALE OF EXTRAS.

[Cut nail card adopted at New York April 30, 1902; wire nail card adopted at New York December 1, 1896.]

Cut nails.	Price above base per 100- pound keg.	Wire nails.	Price above base per 100- pound keg.
<i>Common, fence, hook-head brads, and sheathing.</i>		<i>Common, fence, flooring, and common brads.</i>	
20d. to 60d	Base.	20d. to 60d	Base.
10d. to 16d	\$0.06	10d. to 16d	\$0.06
8d. and 9d	.10	8d. and 9d	.10
6d. and 7d	.20	6d. and 7d	.20
4d. and 5d	.30	4d. and 5d	.30
3½d	.40	3d	.45
3d	.45	2d	.70
2d	.75		
		<i>Barbed common and barbed cut.</i>	
		Advance over common	.15
<i>Casing, box, flooring, and finishing.</i>		<i>Casing and smooth box.</i>	
10d. and larger	.15	10d. and larger	.15
8d. and 9d	.25	8d. and 9d	.25
6d. and 7d	.35	6d. and 7d	.35
4d. and 5d	.50	4d. and 5d	.50
3d	.70	3d	.70
2d	1.00	2d	1.00
		<i>Barbed box.</i>	
		Advance over smooth	.15
<i>Fine.</i>		<i>Fine.</i>	
4d	.50	3d	.50
3d	.75	2d	1.00
2d	1.00		
3d fine (Eureka)	1.25		
3d fine (light)	1.25		

NATIONAL NAIL CARD SCALE OF EXTRAS—Concluded.

[Cut nail card adopted at New York April 30, 1902; wire nail card adopted at New York December 1, 1896.]

Cut nails.	Price above base per 100- pound keg.	Wire nails.	Price above base per 100- pound keg.
<i>Fine finishing.</i>		<i>Smooth finishing.</i>	
10d. and larger	\$0.25	10d. and larger	\$0.25
8d. and 9d.	.35	8d. and 9d.	.35
6d. and 7d.	.45	6d. and 7d.	.45
4d. and 5d.	.50	4d. and 5d.	.65
3d.	.85	3d.	.85
2d.	1.15	2d.	1.15
<i>Spikes.</i>		<i>Spikes.</i>	
All sizes	.10	All sizes	.10
<i>Light barrel and lining.</i>		<i>Lining.</i>	
1½-inch	.75	1-inch	.80
1-inch	.85	¾-inch	1.00
¾-inch	1.00	½-inch	1.20
½-inch	1.20		
<i>Common barrel, roofing, cooper, and cement.</i>		<i>Barrel.</i>	
1½-inch	.30	1½-inch	.30
1½-inch	.40	1½-inch	.40
1½-inch	.50	1½-inch	.50
1½-inch	.60	1½-inch	.60
1-inch	.70	1-inch	.70
¾-inch	.85	¾-inch	.85
½-inch	1.00	½-inch	1.00
<i>Clinch, car, boat, chute, clout, hoop, and hinge.</i>		<i>Barbed roofing.</i>	
3-inch and larger	.45	2-inch	.35
2½ and 2½ inch	.55	1½-inch	.45
2 and 2½ inch	.65	1½-inch	.45
1½ and 1½ inch	.75	1½-inch	.55
1½-inch	.95	1½-inch	.60
1½-inch	1.05	1-inch	.60
1-inch	1.15	¾-inch	.65
¾-inch	1.30	½-inch	.75
½-inch	1.45		
<i>Slating.</i>		<i>Slating.</i>	
6d.	.30	6d.	.30
4d. and 5d.	.40	4d. and 5d.	.40
3d.	.60	3d.	.60
2d.	.80	2d.	.80
<i>Tobacco manufacturers box.</i>		<i>Barred dovetail pins.</i>	
6d. and 7d. lining	.20	1½-inch	1.00
4d. and 5d.	.30	1½-inch	1.00
5d. caddy	.30	1½-inch	1.00
4d. caddy	.50	1½-inch	1.15
3d. caddy	.70	1-inch	1.25
		¾-inch	1.50
<i>Tobacco warehouse.</i>		½-inch	1.75
6d.	.10	¼-inch	2.00
6d. and 7d.	.20		
4d. and 5d.	.40		

Several nail cards have been in use during the fourteen years from 1890 to 1903. The base sizes under the various cards, and also the

advance for the different sizes of common and fence nails, are shown in the following table:

BASE SIZES AND ADVANCE ABOVE BASE PRICE FOR THE DIFFERENT SIZES OF COMMON AND FENCE NAILS UNDER THE VARIOUS NAIL CARDS IN USE FROM 1880 TO 1903.

Size.	Cut nails.						Wire nails.			
	Card adopted Oct. 22, 1889.	Card adopted Mar. 13, 1890.	Card adopted Feb. 21, 1893.	Card adopted July 13, 1895. (a)	Card adopted Dec. 1, 1896.	Card adopted Apr. 30, 1902.	Card adopted June 1, 1890.	Card adopted Apr. 11, 1892.	Card adopted July 19, 1895. (a)	Card adopted Dec. 1, 1896.
60d.....	\$0.25	Base.	Base.	\$0.50	Base.	Base.	Base.	Base.	\$0.50	Base.
50d.....	.25	Base.	\$0.10	.50	Base.	Base.	\$0.10	\$0.10	.50	Base.
40d.....	.10	\$0.05	.25	.50	Base.	Base.	.20	.25	.50	Base.
30d.....	.10	.10	.25	.50	Base.	Base.	.20	.25	.50	Base.
20d.....	.10	.15	.35	.50	Base.	Base.	.30	.35	.50	Base.
16d.....	Base.	.15	.45	.50	\$0.05	\$0.05	.35	.45	.50	\$0.05
12d.....	Base.	.15	.45	.50	.05	.05	.35	.45	.50	.05
10d.....	.10	.20	.50	.50	.05	.05	.40	.50	.50	.05
9d.....	.25	.25	.60	.60	.10	.10	.50	.60	.60	.10
8d.....	.25	.25	.60	.60	.10	.10	.50	.60	.60	.10
7d.....	.40	.40	.75	.75	.20	.20	.65	.75	.75	.20
6d.....	.40	.40	.75	.75	.20	.20	.65	.75	.75	.20
5d.....	.60	.60	.90	.90	.30	.30	.90	.90	.90	.30
4d.....	.60	.60	.90	.90	.30	.30	.90	.90	.90	.30
3d.....	-----	-----	-----	-----	-----	.40	-----	-----	-----	-----
2d.....	1.60	1.00	1.20	1.20	.45	.45	1.50	1.20	1.20	.45
	1.50	1.50	1.60	1.60	.70	.75	2.00	1.60	1.60	.70

a No base size; all nails sold at an advance above base price.

The base prices of nails are the prices quoted by the trade, and while they could not be used, for reasons explained in Bulletin No. 39, in computing relative prices, they form the basis from which are calculated the actual prices for eight-penny nails as given in Table I, and therefore the base prices of both cut and wire nails during 1903 are given in the following table:

NAILS: CUT, BASE SIZES.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month; quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
January.....	\$2.05	April.....	\$2.15	July.....	\$2.15	October.....	\$2.15
February.....	2.10	May.....	2.15	August.....	2.15	November.....	1.95
March.....	2.10	June.....	2.15	September...	2.15	December...	1.90
Average.							\$2.066

NAILS: WIRE, BASE SIZES.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month; quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
January.....	\$1.90	April.....	\$2.00	July.....	\$2.00	October.....	\$2.00
February.....	1.90	May.....	2.00	August.....	2.00	November.....	2.00
March.....	2.00	June.....	2.00	September...	2.00	December...	1.90
Average.							\$1.9750

In previous Bulletins quotations have been published for two descriptions of scoured wool, but in view of the fact that such a large proportion of the wool is now being marketed unwashed, monthly

price quotations for a standard grade of unwashed wool have been secured.

For comparative purposes the quotations on the scoured basis are continued in Table I. No relative prices were computed from the quotations of unwashed wool. It may be necessary at some future time to use these quotations in the index number, and it was considered advisable to secure them while the records for previous years were in existence.

The quotations of actual prices of unwashed wool on the first of each month from 1890 to 1903 follow:

WHOLESALE PRICES OF UNWASHED, OHIO, MEDIUM FLEECE WOOL (ONE-FOURTH AND THREE-EIGHTHS GRADE), 1890 TO 1903.

[Price per pound in the eastern markets (Baltimore, Boston, New York, and Philadelphia) on the first of each month.]

Year.	Jan- uary.	Feb- ruary.	March.	April.	May.	June.	July.	Aug- ust.	Sep- tem- ber.	Oct- ober.	Nov- em- ber.	Dec- em- ber.	Aver- age.
1890...	\$0.27	\$0.25½	\$0.25½	\$0.25½	\$0.26	\$0.27	\$0.26½	\$0.26½	\$0.25½	\$0.27	\$0.27½	\$0.27½	\$0.2648
1901...	.27½	.27½	.27½	.27½	.26½	.26	.26	.26½	.26½	.26½	.26½	.26½	.2669
1902...	.26	.27	.26½	.26½	.26½	.26	.26½	.26	.26½	.25½	.25½	.25½	.2585
1903...	.25½	.26½	.26½	.26	.26	.22	.20	.20½	.20	.19½	.19½	.19½	.2246
1904...	.19½	.18½	.19	.19	.19	.18	.16½	.17½	.17½	.17½	.17	.16½	.1796
1905...	.16	.16½	.16½	.16½	.16	.15½	.18	.18	.18	.18	.18	.18	.1708
1906...	.18	.18	.18	.17½	.16	.15½	.15½	.15½	.15½	.15½	.15½	.16	.1638
1907...	.16	.16	.17½	.18	.18	.18	.19½	.20½	.22	.22½	.23½	.23½	.1958
1908...	.23½	.23½	.22½	.22½	.22	.22	.22½	.23	.23	.22½	.22	.21½	.2258
1909...	.21½	.22½	.22½	.22	.22	.22½	.23½	.24	.24	.24½	.25½	.28	.2356
1900...	.26½	.29	.28½	.27	.26½	.25	.24½	.24½	.24	.23½	.23½	.23½	.2567
1901...	.23½	.23	.23	.23	.21½	.19½	.19½	.19½	.20½	.20½	.20½	.21½	.2129
1902...	.21½	.21½	.21½	.21½	.21½	.21½	.22½	.23	.23	.23½	.23½	.24	.2238
1903...	.24½	.24½	.23½	.23	.22½	.23½	.24½	.24½	.24½	.25	.25	.25	.2425

Table II.—Base prices (average for 1890–1899), and monthly actual and relative prices of commodities in 1903, pages 320 to 337.—This table shows for each commodity the base price (average price for the 10-year period, 1890–1899), either the average price or the price on some one day of each month, and the relative price for each month of 1903. In addition this table shows for each commodity the average price and the relative price for the year 1903. The monthly prices for such articles as are quoted weekly in Table I were found by dividing the sum of the quotations in each month as shown in Table I by the number of quotations in each month. In Table I single quotations for 1903 are shown for 11 articles. The prices of six of these are maintained throughout the year and the prices of three others represent the bulk of the sales and are maintained generally; therefore for each of these nine articles the annual price has been shown in Table II as the price during each month. The other two articles for which single quotations for 1903 are shown in Table I have a September price which represents the bulk of the sales for the year, and the relative price for 1903 was, therefore, computed from that price, but the price at which sales were made from January to March was the price of September, 1902; from April to August the price of April, 1903, and from September to December the price of September, 1903; consequently these prices were used in this table presenting monthly prices.

It was impossible to secure quotations during all of the months of the year for 3 of the 260 articles, viz: Buckwheat flour, for which there is no demand during the summer months; potatoes; and sheetings, bleached, 10-4, Atlantic.

The average price for 1903 was obtained, as has already been explained, by dividing the sum of the quotations for the year as shown in Table I by the number of quotations for the year. The average price for the 10-year period, 1890 to 1899, was obtained by dividing the sum of the average prices of the 10 years by 10. This average price for 10 years has been adopted as the base for all relative prices. For the ten articles which do not show prices for the entire period of 10 years, 1890 to 1899, the base in each case is the average of the years prior to and including 1899. In explanation of the term base or standard as used in connection with relative prices or index numbers, it may be stated that in reducing a series of actual prices to relative prices a base must first be chosen, and this may be either a single quotation, the average price for 1 year, or the average for 2 or more years. If the price for a single year is chosen, it is essential that that year be a normal one, for if prices are high in the year chosen for the base any subsequent fall will be unduly emphasized, while, on the other hand, if prices are low any subsequent rise will be emphasized. Upon examination of the prices since 1890 it was found that all the commodities did not present a normal condition as regards prices in any one year. For this reason it was decided that an average price for a number of years would better reflect average or approximately normal conditions and form a more satisfactory base than would the price for any single year. The period chosen as this base was that from 1890 to 1899— a period of 10 years. The average price for the base period was found, as previously stated, by adding together the average prices for all of the 10 years and dividing by 10.

The relative prices as shown in this and succeeding tables have been calculated in the usual manner and represent simply the percentage which each monthly or yearly price is of the base price. The average price for the first 10 years of the period, or the base, always represents 100, and the percentages for each month or year enable the reader to measure readily the rise and fall from month to month or from year to year of the prices of each single commodity, of any group of commodities, or of all the 260 commodities involved. These commodities are arranged in alphabetical order under each of the nine general groups, as in Table I.

In order that the method pursued may be more readily understood, the reader is referred to the table itself, as given on pages 320 to 337. Taking up the first commodity shown, barley, we find that the average price per bushel for the base period, 1890 to 1899, inclusive, was 45.34 cents; the average price for January, 1903, was 56 cents; that for *February* was 54.13 cents; that for *March* 52.88 cents, etc. The rela-

tive price for the base period, as heretofore explained, is always placed at 100 and is so given in the table. The relative price for January, 1903, is shown to be 123.5, or 23.5 per cent higher than the base or average for the 10 years. In February the relative price was 119.4, or 19.4 per cent above the base; in March the relative price was 116.6, or 16.6 per cent above the base; in April it was 115.8, or 15.8 per cent above the base; in May it rose to 120.0, or 20.0 per cent above the base; in June it was 118.0, or 18.0 per cent above the base; in July it dropped to 114.0, or 14.0 per cent above the base, but rose again in August to 118.3, or 18.3 per cent above the base; in September it reached the highest point shown for the year, 130.1, or 30.1 per cent above the base; from that point it declined until December when it was 123.9, or 23.9 per cent above the base. The relative price for the year 1903 was 121.2, or 21.2 per cent above the base. The figures in each case were secured according to the method already explained, that for January, 1903, being expressed as follows:

Average price for base period.....	\$0.4534
Average price for January, 1903.....	.5600
Relative price for base period.....	100.0
Relative price for January, 1903.....	123.5

The remainder of the table may be analyzed in a similar manner.

The value of prices given in this relative form, it will readily be seen, consists in the means afforded for tracing and measuring the changes from month to month, from year to year, or from period to period, and in the combination of prices of a sufficient number of commodities to show the general price level. It must not be assumed that a system of relative prices of representative commodities will enable one to trace the causes of changes in the general price level or to determine the effect of such changes on any class of consumers or on all consumers. The use of such a system is to show the general course of prices from time to time of one commodity, of a group of commodities, or of all commodities.

No attempt has been made in any way to go into the causes of the rise and fall of prices. The aim has been to give the prices as they actually prevailed in the market. The relative prices or index numbers must be accepted merely as showing the course of prices both of the individual articles and the market in general. The causes are too complex, the relative influence of each too uncertain, in some cases involving too many economic questions, to permit their discussion in connection with the present article. It will be sufficient to enumerate some of the influences that cause changes in prices. Such influences include variations in harvest, which not only restrict or increase the supply and consequently tend to increase or decrease the price of a commodity, but also restrict or increase, to a greater or less degree, the purchasing power of such communities as are dependent in whole or in part upon such commodity; changes in demand due to

changes in fashions, seasons, etc.; legislation altering internal-revenue taxes, import duties, or bounties; use of substitutes—as, for instance, an advance in the price of beef will cause an increased consumption of pork and mutton, and, it may be added, a probable increase in the price of both pork and mutton; improvements in methods of production which will tend either to give a better article for the same price or an equal article for a lower price; cheapening of transportation or handling; speculative manipulation of the supply or of the raw product; commercial panic or depression; overproduction; unusual demand owing to steady employment of consumers; short supply owing to disputes between labor and capital in industries of limited producing capacity, as in the anthracite coal industry in 1902; organization or combination of mills or producers, thus enabling, on the one hand, a greater or less control of prices or, on the other hand, economies in production or in transportation charges through the ability to supply the article from the point of production or manufacture nearest the purchaser. So far as individual commodities are concerned, no conclusion can safely be formed as to causes without an examination of the possible influence of several—in some cases perhaps all—of these causes. For example, the various internal-revenue and tariff acts have, in a marked degree, no doubt affected the prices of proof spirits, of tobacco, and of sugar. But, on the other hand, they have not been alone in their influences, and it probably would not in all cases be accurate to give the change of tax or duty as representing the measure of a certain and definite influence on the prices of those commodities.

It is important that the greatest care be exercised in the choice of commodities in order that a simple average of their relative prices shall show a general price level. In the present compilation 260 commodities are shown, and it has been the aim of the Bureau to select only important and representative articles in each group. The number of articles included is larger than has heretofore been used in similar compilations, but the use of a large number of articles carefully selected minimizes the effect on the general price level of an unusual change in the price of any one article or of a few articles. It will be seen that more than one series of prices have been given in the case of articles of great importance. This has been done for the purpose of giving due weight to these important commodities, no other method of accomplishing this having been found satisfactory in this country. The same means have been employed by Mr. Sauerbeck in his English prices, as explained in Bulletin No. 39, and the approximate accuracy of the same, as an indication of the variation of prices, has been proved by various tests based on the amount of production, etc.

Various methods of weighting have been attempted in connection with previous compilations of relative prices. One method employed by European statisticians is to measure the importance of each commodity by its annual consumption by the entire nation, the annual

consumption being found by adding to the home production the amount imported and subtracting the amount exported. The impossibility of securing even approximately accurate figures for annual consumption in the United States of the commodities included in this compilation renders this method unavailable here. The method employed in the Aldrich report consisted in giving to the various commodities or groups of commodities an importance based upon their consumption in normal families. There are, of course, many commodities whose importance can not be measured by this method. It has been thought best in the present series of index numbers, after a careful consideration of all methods of weighting, simply to use a large number of representative staple articles, selecting them in such a manner as to make them, to a large extent, weight themselves. Upon a casual examination it may seem that by this method a comparatively unimportant commodity—such, for instance, as cotton-seed meal—has been given the same weight or importance as one of the more important commodities, such as wheat. A closer examination, however, shows that cotton-seed meal enters into no other commodity under consideration, while wheat is not only quoted as the raw material, but enters into the two descriptions of wheat flour, the two descriptions of crackers, and the three descriptions of loaf bread.

Material changes in the description of three articles were made in 1892, and of two articles in 1903.

For two of these articles the trade journals no longer supply regular quotations, and the manufacture of the particular grades of the other three previously quoted has been discontinued by the establishments heretofore furnishing quotations.

The articles in which changes occur are—"Leather: harness, oak, country middles, 14 pounds and up (except overweights, 20 pounds and up)," for which has been substituted "Leather: harness, oak, packers' hides, heavy No. 1;" "Sheetings: brown, 4-4, Stark, A. A.," for which has been substituted "Sheetings, brown, 4-4, Massachusetts Mills, Flying Horse brand;" "Trouserings: fancy worsted, 22 to 23 ounce, worsted filling, wool and worsted backs," for which has been substituted "Trouserings: fancy worsted, 21 to 22 ounce, all worsted warp and filling, wool and worsted back;" "Underwear: shirts and drawers, white, merino, full-fashioned, 52 per cent wool, 48 per cent cotton, 24 gauge," for which has been substituted "Underwear: shirts and drawers, white, merino, full-fashioned, 60 per cent wool, 40 per cent cotton, 24 gauge;" and "Shingles: white pine, 18 inches long, XXXX," for which has been substituted "Shingles: Michigan white pine, 16 inches long, XXXX."

In making these substitutions articles were supplied corresponding as closely as possible to those which had been previously used.

Some explanation of the method of computing the relative price of these articles is necessary, and shingles will be used as an illustration.

It must be understood that during the years when 18-inch shingles were quoted they were assumed to represent the several lengths and grades of white pine shingles; that is, that the course of prices of a standard grade of white pine shingles in an index number of prices fairly represents the course of prices of the various grades of white pine shingles. Therefore when it became necessary to substitute, in 1902, the 16-inch shingles for the 18-inch, prices were secured for 16-inch shingles for both 1901 and 1902, and it was found that the price for the year 1902 was 9.96 per cent above the price for the year 1901. The relative price of 18-inch shingles in 1901, as shown in Table IV, was 111.9 (average price for the 10 years, 1890 to 1899, equals 100), and if 18-inch shingles represented white pine shingles at that time and 16-inch shingles now represent the class, shingles (shown by the increase in price of 16-inch shingles) advanced, in 1902, 9.96 per cent above the price in 1901, and the relative price in 1902 was therefore 109.96 per cent of 111.9, the relative price in 1901, which gives 123 as the relative price in 1902. The same method was followed in computing relative prices for each of the months of 1902. The average price in 1903 was 1.74 per cent above the price in 1902; therefore the relative price in 1903 was 101.74 per cent of 123, the relative price in 1902, which gives 125.1 as the relative price in 1903. The same method was followed for leather and sheetings. For trouserings and underwear the exact grade quoted for 1903 was not manufactured in 1902. The manufacturer of trouserings, however, estimates that one-half the advance in price over the price for the grade quoted for previous years was due to the fact that it was a better article and the other half to the advance in price of material and cost of manufacture. The advance was \$0.1125 per yard over the price in 1902; one-half of this, \$0.05625, was added to the 1902 price of the 22 to 23 ounce trouserings to secure a theoretical 1902 price for the 21 to 22 ounce trouserings, and the 1903 relative price was then computed as above. Underwear was arbitrarily given the same relative price in 1903 as in 1902, as the all-wool underwear manufactured by the same firm shows no change in price.

Table III.—Relative prices of commodities in 1903, pages 337 to 349.—This table is taken from Table II and shows the relative prices of each of the commodities included there. In this table similar commodities have been grouped, and the average of the relative prices shown for the commodities in each subgroup and in each of the nine general groups. The averages in all cases were found by dividing the sum of the relative prices by the number of commodities in the group under consideration. It should be borne constantly in mind that the term commodity is used here and elsewhere in a specific sense, "native" and "Western" sheep, for example, being considered different commodities. The method of securing average relative prices in this and other tables was as follows: The average relative price of cattle was

found by adding the relative prices of the two grades of cattle and dividing the sum by 2. The average for hogs was found in the same manner, and also the average for sheep. The average for live stock was found by dividing the sum of the relative prices of the two grades of cattle, the two grades of hogs, and the two grades of sheep by 6, the total number of different descriptions of commodities or series of quotations in the live-stock group. The average relative price of each of the nine general groups was found by dividing the sum of the relative prices of the different descriptions of commodities for each month by the number of these commodities or series of quotations considered. The sum of the relative prices in January, 1903, of the commodities shown under the general group, "food, etc.," for example, is 6,063.1, which amount divided by 54, the number of different descriptions of commodities or series of quotations considered in that group, gives 112.3 the average for the group "food, etc.," for January, 1903. As explained in the discussion of Table II, it was impossible to secure quotations during all of the months of the year for 3 of the 260 articles. In order of arrangement these are buckwheat flour, potatoes, and sheetings—bleached, 10-4, Atlantic. In presenting monthly relative prices for these articles a nominal relative price (which is the same as the relative price for the month in which the article was last quoted) has been entered in this table for the months for which no price quotation is shown in Table I. This nominal price enters into the average for the subgroup, the general group, and "all commodities" for that month.

The average relative price of each of the nine general groups for each month of 1903 and for the year 1903, and the average relative price of all commodities for each month and for the year, are shown in the following summary:

SUMMARY OF RELATIVE PRICES OF COMMODITIES IN 1903, BY GROUPS.

[Average price for 1890-1899 = 100.]

Month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House-furnishing goods.	Miscellaneous.	All commodities.
January	123.3	112.3	101.2	178.6	119.1	120.7	111.8	112.2	113.3	115.9
February	121.8	111.4	104.5	178.6	119.6	122.8	111.4	112.2	113.5	116.1
March	127.0	112.3	104.9	154.8	121.6	123.3	113.7	113.1	114.9	115.9
April	125.0	110.0	105.0	149.0	123.1	120.9	111.4	113.1	114.2	114.9
May	122.1	104.8	105.4	145.0	121.9	118.7	112.8	113.1	115.1	113.2
June	121.1	105.6	106.3	143.1	119.7	120.6	113.7	113.1	114.3	113.4
July	115.8	103.8	107.5	141.1	118.1	120.1	113.1	113.1	114.3	112.6
August	114.8	103.1	107.8	140.3	117.0	119.5	113.9	113.1	114.4	112.2
September	117.2	107.1	108.2	140.4	115.8	121.5	112.8	112.7	114.1	113.3
October	112.5	104.4	108.0	141.2	114.3	121.3	112.6	113.5	114.5	112.3
November	109.9	105.6	108.1	140.1	111.8	121.3	112.5	113.5	110.4	112.1
December	112.2	105.5	108.6	139.8	109.0	123.1	111.4	113.5	110.1	111.7
1903	118.8	107.1	106.6	149.3	117.6	121.4	112.6	113.0	113.6	113.6

In this table the average relative prices of farm products are based on 16 articles; of food, etc., on 54 articles; of cloths and clothing, on

Many students of price statistics desire to distinguish between raw commodities and manufactured commodities, or those which have been prepared for consumption by the application of manufacturing processes and in which manufacturing labor forms a considerable part of the cost. To meet the wishes of this class of readers, therefore, the commodities included in this price series have been divided into the two classes, raw and manufactured, and simple averages made for each class. Of course, hard and fast definitions of these classes can not be made, but the commodities here designated as raw may be said to be such as are marketed in their natural state and such as have been subjected to only a preliminary manufacturing process, thus converting them into a marketable condition, but not to a suitable form for final consumption, while the commodities here designated as manufactured are such as have been subjected to more than a preliminary factory manipulation and in which the manufacturing labor cost constitutes an important element in the price. In the group designated as raw are included all farm products, beans, coffee, eggs, milk, rice, nutmegs, pepper, tea, vegetables, raw silk, wool, coal, crude petroleum, copper ingots, pig lead, pig iron, bar silver, spelter, pig tin, brimstone, jute, and rubber—a total of 50 articles.

All the other articles are classed as manufactured commodities.

The table follows:

RELATIVE PRICES OF RAW COMMODITIES, MANUFACTURED COMMODITIES, AND ALL COMMODITIES, IN 1903.

[Average price for 1890-1899 = 100.]

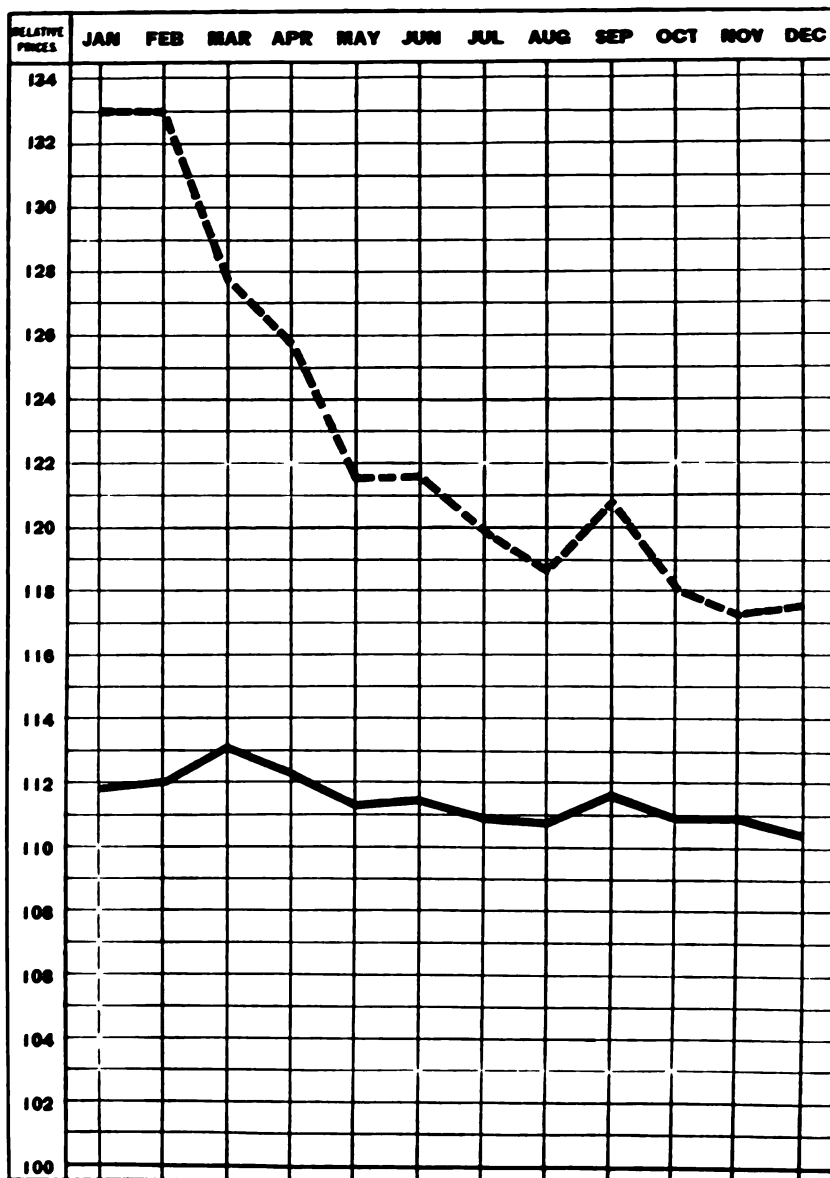
Month.	Raw commodities.	Manufactured commodities.	All commodities.
January.....	133.0	111.8	115.9
February.....	133.0	112.0	116.1
March.....	127.8	113.1	115.9
April.....	125.8	112.3	114.9
May.....	121.5	111.3	113.2
June.....	121.6	111.4	113.4
July.....	119.9	110.9	112.6
August.....	118.6	110.7	112.2
September.....	120.7	111.6	113.8
October.....	118.1	110.9	112.8
November.....	117.2	110.9	112.1
December.....	117.5	110.4	111.7
1903.....	122.7	111.5	113.6

The raw commodities reached the lowest average of the year in November and the highest in January and February; manufactured commodities reached the lowest in December and the highest in March. The average for raw commodities ranged from 17.2 per cent to 33.0 per cent above the base price, while the average for manufactured commodities ranged from 10.4 per cent to 13.1 per cent above the base price.

The course of prices of raw and manufactured commodities during 1903 is shown in the graphic table which follows:

RELATIVE PRICES OF RAW AND MANUFACTURED COMMODITIES IN 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)



--- = RAW COMMODITIES. — = MANUFACTURED COMMODITIES.

Table IV.—Base prices (average for 1890–1899), and average yearly actual and relative prices of commodities, 1890 to 1903, pages 349 to 367.—This table shows for each commodity the base price (average price for the 10-year period, 1890–1899), the average price for each of the 14 years from 1890 to 1903, and the relative price for each year. The average price for each year was obtained, as has been explained, by dividing the sum of the quotations for each year as shown in Table I by the number of quotations for each year. The average price for the 10-year period 1890 to 1899 was obtained by dividing the sum of the average prices of the 10 years by 10. The relative prices for each year were computed in the same way as for each month, as explained in the discussion of Table II.

Table V.—Relative prices of commodities, 1890 to 1903, pages 367 to 379.—This table is taken from Table IV and shows the relative prices of each of the commodities included there. In this table similar commodities have been grouped and the average of the relative prices shown for the commodities in each subgroup and in each of the nine general groups. The averages in all cases were found by dividing the sum of the relative prices by the number of commodities in the group under consideration, as explained in the discussion of Table III.

The average relative price of each of the nine general groups was found by dividing the sum of the relative prices of the different descriptions of commodities for each year by the number of these commodities or series of quotations considered in that year. The sum of the relative prices in 1890 of the commodities shown under the general group, "food, etc.," for example, is 5,958.2, which amount divided by 53, the number of different descriptions of commodities or series of quotations considered that year, gives 112.4, the average for the group "food, etc.," for 1890. For 1893 to 1903, 54 commodities are quoted in this group, and that number is accordingly the divisor for each of those years.

The average relative price of each of the nine general groups for each year of the period, and the average relative price of all commodities for each year, are shown in the summary following.

SUMMARY OF RELATIVE PRICES OF COMMODITIES, 1890 TO 1903, BY GROUPS.

[Average price for 1890-1899 = 100.]

Year.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	All commodities.
1890	110.0	112.4	113.5	104.7	119.2	111.8	110.2	111.1	110.3	112.9
1891	121.5	115.7	111.3	102.7	111.7	108.4	103.6	110.2	109.4	111.7
1892	111.7	103.6	109.0	101.1	106.0	102.8	102.9	106.5	106.2	106.1
1893	107.9	110.2	107.2	100.0	100.7	101.9	100.5	104.9	105.9	105.6
1894	95.9	99.8	96.1	92.4	90.7	96.3	89.8	100.1	99.8	96.1
1895	93.3	94.6	92.7	98.1	92.0	94.1	87.9	96.5	94.5	93.6
1896	78.3	83.8	91.3	104.3	93.7	93.4	92.6	94.0	91.4	90.4
1897	85.2	87.7	91.1	96.4	86.6	90.4	94.4	89.8	92.1	89.7
1898	96.1	94.4	93.4	96.4	86.4	95.8	100.6	92.0	92.4	93.4
1899	100.0	98.3	96.7	105.0	114.7	105.8	111.3	95.1	97.7	101.7
1900	109.5	104.2	106.8	120.9	120.5	115.7	115.7	106.1	109.8	110.5
1901	116.9	105.9	101.0	119.5	111.9	116.7	115.2	110.9	107.4	108.5
1902	130.6	111.3	102.0	134.3	117.2	118.8	114.2	112.2	114.1	112.9
1903	118.8	107.1	106.6	140.3	117.6	121.4	112.6	113.0	113.6	113.6

In this table the average relative prices of farm products are based on 16 articles; of food, etc., on 53 articles from 1890 to 1892, and 54 from 1893 to 1903; of cloths and clothing, on 70 articles in 1890 and 1891, 72 in 1892, 73 in 1893 and 1894, 75 in 1895 and 1896, and 76 from 1897 to 1903; of fuel and lighting, on 13 articles; of metals and implements, on 87 articles from 1890 to 1893, 38 in 1894 and 1895 and from 1899 to 1903, and 39 from 1896 to 1898; of lumber and building materials, on 26 articles from 1890 to 1894, and 27 from 1895 to 1903; of drugs and chemicals, on 9 articles; of house furnishing goods, on 14 articles; and of miscellaneous, on 13 articles. The average relative prices of all commodities are based on 251 articles in 1890 and 1891, on 253 in 1892, on 255 in 1893, on 256 in 1894, on 259 in 1895, on 260 in 1896 and from 1899 to 1903, and on 261 in 1897 and 1898.

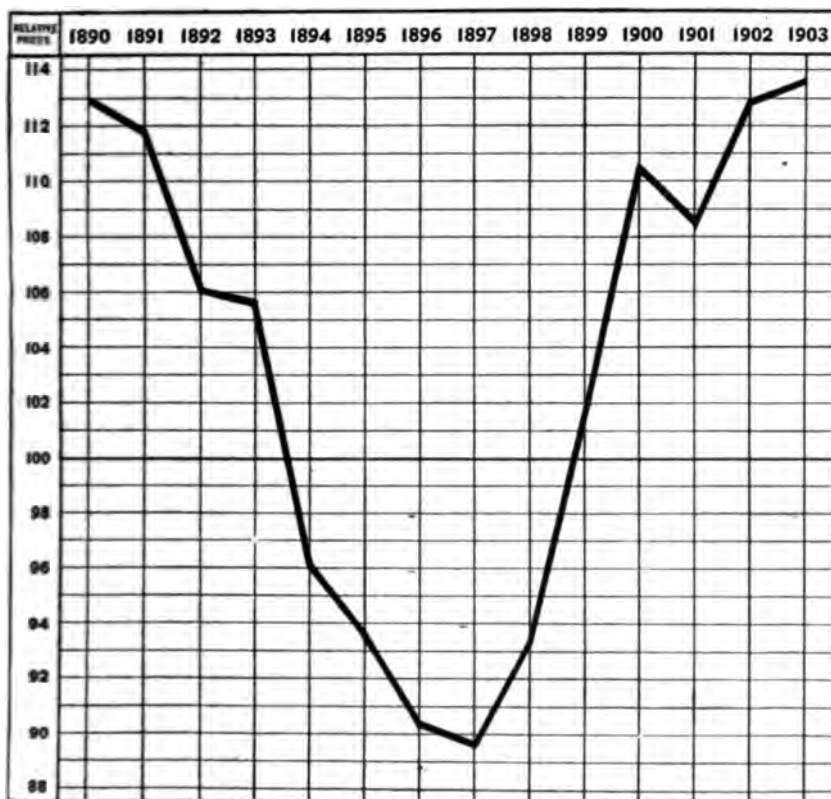
A study of the table shows that the group of farm products reached the lowest average in 1896 and the highest in 1902; that of food, etc., the lowest in 1896 and the highest in 1891; that of cloths and clothing, the lowest in 1897 and the highest in 1890; that of fuel and lighting, the lowest in 1894 and the highest in 1903; that of metals and implements, the lowest in 1898 and the highest in 1900; that of lumber and building materials, the lowest in 1897 and the highest in 1903; that of drugs and chemicals, the lowest in 1895 and the highest in 1900; that of house furnishing goods, the lowest in 1897 and the highest in 1903, while in the miscellaneous group the lowest average was reached in 1896 and the highest in 1902. The average for all commodities combined was the lowest in 1897 and the highest in 1903. Of the nine groups it is seen that one reached its lowest point in 1894, one in 1895, three in 1896, three in 1897, and one in 1898. The highest point was reached by one group in 1890, by one in 1891, by two in 1900, by two in 1902, and by three in 1903.

The average relative prices of the 250 commodities for which quotations were secured for the entire period involved do not differ materially from the average relative prices of all commodities shown in the above table. Eliminating the commodities for which quotations could be secured for only a portion of the period, we find that the average relative prices of the 250 commodities remaining was 112.9 in 1890, 111.7 in 1891, 106.0 in 1892, 105.4 in 1893, 95.9 in 1894, 93.5 in 1895, 90.3 in 1896, 89.6 in 1897, 93.2 in 1898, 101.4 in 1899, 110.1 in 1900, 108.3 in 1901, 112.8 in 1902, and 113.7 in 1903.

The course of wholesale prices during the 14 years 1890 to 1903, as represented by all commodities considered, is shown in the graphic table which follows:

RELATIVE PRICES OF ALL COMMODITIES, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899 = 100.)



In the table which follows, all commodities under consideration have been divided into two classes or groups. The 50 articles which are included in the group of raw commodities are shown on page 245. All the other articles are classed as manufactured commodities.

RELATIVE PRICES OF RAW COMMODITIES, MANUFACTURED COMMODITIES, AND ALL COMMODITIES, 1890 to 1903.

[Average price for 1890-1899=100.]

Year.	Raw commodities.	Manufactured commodities.	All commodities.
1890.....	115.0	112.3	112.9
1891.....	116.3	110.6	111.7
1892.....	107.9	105.6	106.1
1893.....	104.4	105.9	105.6
1894.....	98.2	96.8	96.1
1895.....	91.7	94.0	93.6
1896.....	84.0	91.9	90.4
1897.....	87.6	90.1	89.7
1898.....	94.0	98.3	93.4
1899.....	105.9	100.7	101.7
1900.....	111.9	110.2	110.5
1901.....	111.4	107.8	108.5
1902.....	122.4	110.6	112.9
1903.....	122.7	111.5	113.6

In 1890 and 1891, when prices in general were high, the raw commodities were higher than the manufactured, and remained so until 1893, when prices of raw commodities declined and manufactured commodities were slightly above the prices of 1892. From 1894 to 1896 there was a marked decline in both groups, the raw being lower than the manufactured in each of these years. In 1897 raw advanced and manufactured declined. From 1898 to 1900 there was a decided advance in both groups each year, raw advancing to a higher point than manufactured. In 1901 there was a very slight decline in raw and a more marked decline in manufactured. In 1902 both raw and manufactured commodities made a decided advance. In 1903 raw commodities advanced to a point beyond the highest point previously reached in the 14 years under consideration, and manufactured commodities advanced to a level only exceeded by that of one year—1890.

For the 14 years included in this table, with the single exception of 1893, it will be seen that during the years of high prices raw commodities were higher than manufactured, and during the years of low prices, with the exception of 1898, raw were lower than manufactured. This is clearly shown in the graphic table which follows:

RELATIVE PRICES OF RAW AND MANUFACTURED COMMODITIES, 1890 TO 1903.

(AVERAGE PRICE FOR 1890 TO 1899=100.)



----- - RAW, ——— - MANUFACTURED COMMODITIES.

The following table shows for each of the nine general groups the relative prices of 1903 compared with the average for 1890 to 1899. Only the 250 commodities for which quotations were secured for the whole period of 14 years have been included. The average price for 1890 to 1899 is in every case the base or 100 per cent. It should be kept in mind in using this table that the comparison is between the prices for 1903 and the average prices for the base period.

RELATIVE PRICES, 1903 COMPARED WITH AVERAGE PRICE FOR 1890-1899.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Farm products, 16 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Cattle: steers, choice to extra	104.7	Cotton: upland, middling	144.7
Wheat: contract grades, cash	105.1	Hops: New York State, choice	159.5
Cattle: steers, good to choice	106.9		
Hay: timothy, No. 1	119.2	PRICE DECREASED.	
Corn: No. 2, cash	121.1	Sheep: native	96.7
Barley: by sample	121.2	Sheep: Western	96.0
Hides: green, salted, packers, heavy native steers	124.8	Rye: No. 2, cash	97.5
Oats: cash	131.7	Flaxseed: No. 1	94.1
Hogs: light	137.0		
Hogs: heavy	137.3	Average for farm products	118.8

Food, etc., 53 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Bread: loaf (Washington market)	100.5	Beans: medium, choice	125.5
Flour: wheat, spring patents	100.8	Meat: bacon, short clear sides	142.1
Rice: domestic, choice	100.9	Meat: bacon, short rib sides	143.0
Bread: loaf, homemade (N. Y. market) ..	101.0	Meat: pork, salt, mess, old to new	143.1
Bread: loaf, Vienna (N. Y. market)	101.0	Fish: herring, shore, round	151.7
Meat: beef, fresh, native sides	101.7	Spices: pepper, Singapore	172.1
Salt: Ashton's	102.0		
Butter: creamery, extra (N. Y. market) ..	104.7	PRICE DECREASED.	
Vegetables, fresh: onions	104.9	Meat: mutton, dressed	98.7
Fish: cod, dry, bank, large	105.0	Sugar: granulated	98.2
Vegetables, fresh: potatoes, Burbank	105.2	Fruit: raisins, California, London layer ..	98.3
Butter: creamery, Elgin (Elgin market) ..	106.1	Sugar: 96° centrifugal	98.1
Butter: dairy, New York State	106.2	Sugar: 89° fair refining	95.0
Fish: salmon, canned	110.0	Flour: rye	94.9
Molasses: New Orleans, open kettle, prime ..	112.5	Flour: wheat, winter straights	94.4
Bread: crackers, Boston X	112.6	Starch: pure corn	92.5
Milk: fresh	112.9	Bread: crackers, soda	90.0
Meat: beef, salt, extra mess	113.1	Vinegar: cider, Monarch	88.0
Meat: beef, salt, hams, Western	117.2	Salt: American	87.2
Tallow	117.2	Fruit: apples, sun-dried, Southern, sliced ..	85.9
Flour: buckwheat	119.5	Tea: Formosa, fine	80.9
Eggs: new-laid, fancy, near-by	123.2	Fruit: apples, evaporated, choice	72.1
Cheese: New York State, full cream	123.3	Spices: nutmegs	66.6
Fish: mackerel, salt, large No. 3s	123.5	Fruit: prunes, California, in boxes	62.1
Meal: corn, fine white	123.7	Soda: bicarbonate of, American	61.7
Meal: corn, fine yellow	125.7	Coffee: Rio No. 7	42.6
Fruit: currants, in barrels	126.9		
Meat: hams, smoked	129.2	Average for food, etc.	106.6
Lard: prime contract	134.1		

RELATIVE PRICES, 1903 COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Cloths and clothing, 70 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Ginghams: Lancaster.....	100.3	Flannels: white, 4-4, Ballard Vale No. 3.	114.3
Underwear: shirts and drawers, white, all wool, full-fashioned, 18-gauge.....	100.4	Leather: harness, oak.....	114.3
Women's dress goods: cashmere, cotton warp, 27-inch, Hamilton.....	101.2	Women's dress goods: cashmere, all wool, 10-11 twill, 38-inch, Atlantic Mills J.....	114.3
Women's dress goods: alpaca, cotton warp, 22-inch, Hamilton.....	101.6	Women's dress goods: Franklin sackings, 6-4.....	114.5
Sheetings: brown, 4-4, Stark A. A. (a).....	101.9	Sheetings: brown, 4-4, Atlantic A.....	115.0
Wool: Ohio, medium fleece (½ and ⅔-grade) scoured.....	102.1	Worsted yarns: 2-40s, Australian fine.....	115.6
Shirtings: bleached, 4-4, Wamsutta ^{<0>} _{XX}	102.7	Sheetings: bleached, 10-4, Atlantic.....	115.7
Silk: raw, Japan, flatures.....	102.9	Cotton yarns: carded, white, mule-spun, Northern, cones, 10/l.....	116.2
Sheetings: bleached, 10-4, Wamsutta S.T.....	103.0	Leather: sole, hemlock, nonacid, Buenos Ayres, middle weights, 1st quality.....	116.9
Overcoatings: chinchilla, B-rough, all wool.....	103.1	Overcoatings: beaver, Moscow, all wool, black.....	117.3
Ginghams: Amoskeag.....	103.2	Horse blankets: 6 pounds each, all wool.....	117.8
Shirtings: bleached, 4-4, Lonsdale.....	103.9	Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling.....	117.9
Cotton flannels: 2½ yards to the pound.....	104.1	Wool: Ohio, fine fleece (X and XX grade), scoured.....	118.5
Tickings: Amoskeag A. C. A.....	104.1	Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.....	120.1
Bags: 2-bushel, Amoskeag.....	104.2	Worsted yarns: 2-40s, XXX or its equivalent in quality, white, in skeins (c).....	120.4
Leather: wax calf, 30 to 40 pounds to the dozen, B grade.....	105.4	Sheetings: bleached, 10-4, Pepperell.....	120.8
Shirtings: bleached, 4-4, Fruit of the Loom.....	105.4		
Silk: raw, Italian, classical.....	106.3	PRICE DECREASED.	
Shawls: standard, all wool, 72 x 144 inch, 42-ounce, made of high-grade wool.....	107.0	Boots and shoes: men's calf bal. shoes, Goodyear welt, dongola top.....	98.9
Shirtings: bleached, 4-4, Hope.....	107.1	Linen thread: 3-cord, 200-yard spools, Barbour.....	98.2
Jerseys: Amoskeag.....	108.0	Women's dress goods: cashmere, cotton warp, 22-inch, Hamilton.....	97.8
Carpets: ingrain, 2-ply, Lowell.....	108.1	Shirtings: bleached, 4-4, New York Mills.....	97.0
Drillings: brown, Pepperell.....	108.2	Linen shoe thread: 10s, Barbour.....	96.7
Boots and shoes: women's solid grain shoes, leather, polish or polka.....	108.6	Underwear: shirts and drawers, white, merino, full-fashioned, 52 per cent wool, 48 per cent cotton, 24-gauge (d).....	95.4
Carpets: Brussels, 5-frame, Bigelow.....	108.7	Overcoatings: covert cloth, light weight, staple goods.....	94.0
Sheetings: brown, 4-4, Pepperell R.....	108.7	Boots and shoes: men's brogans, split.....	93.5
Sheetings: brown, 4-4, Indian Head.....	108.8	Overcoatings: chinchilla, cotton warp, C. C. grade.....	92.8
Suitings: indigo blue, all wool, 54-inch, 14-ounce, Middlesex standard.....	108.8	Calico: Cocheo prints.....	91.1
Carpets: Wilton, 5-frame, Bigelow.....	108.9	Hosiery: men's cotton half hose, seamless, standard quality, 84 needles.....	90.0
Cotton flannels: 3½ yards to the pound.....	109.4	Boots and shoes: men's vict. kid shoes, Goodyear welt.....	87.0
Cotton yarns: carded, white, mule-spun, Northern, cones, 22/l.....	109.5	Hosiery: women's cotton hose, seamless, fast black, 26 to 28 ounce, 160 to 176 needles.....	86.8
Blankets: 11-4, 5 pounds to the pair, all wool.....	110.1	Hosiery: men's cotton half hose, seamless, fast black, 20 to 22 ounce, 160 needles.....	82.1
Broadcloths: first quality, black, 64-inch, made from XXX wool.....	110.3	Average for cloths and clothing.....	
Women's dress goods: cashmere, cotton warp, 9-twill, 4-4, Atlantic Mills F.....	110.5		106.3
Leather: sole, oak.....	111.3		
Drillings: 30-inch, Stark A.....	111.6		
Suitings: indigo blue, all wool, 16-ounce.....	112.6		
Boots and shoes: men's split boots, kip top, 16-inch, ½ double sole (b).....	113.1		
Print cloths: 28-inch, 64 x 64.....	113.3		
Blankets: 11-4, 5 pounds to the pair, cotton warp, all-wool filling.....	114.2		

a In 1902 and 1903 quotations are for Massachusetts Mills, Flying Horse brand.

b In 1903, russet bound top, 17-inch, ½ double sole.

c In 1902 and 1903 designated as XXXX.

d In 1903, 60 per cent wool, 40 per cent cotton.

RELATIVE PRICES, 1903 COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Fuel and lighting, 15 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Coal: anthracite, broken	126.2	Coke: Connellsville, furnace	171.5
Coal: anthracite, stove	127.1	Petroleum: crude	174.5
Candles: adamantine, 6s, 14-ounce	127.4	Coal: bituminous, Georges Creek (at mine)	269.6
Petroleum: refined, for export	132.5		
Coal: anthracite, chestnut	134.2	PRICE DECREASED.	
Coal: anthracite, egg	134.3	Matches: parlor, domestic	85.4
Coal: bituminous, Pittsburg (Youghiogheny)	143.9	Average for fuel and lighting	149.3
Petroleum: refined, 150° fire test, w. w. ..	153.1		
Coal: bituminous, Georges Creek (f.o. b., New York Harbor)	161.8		

Metals and implements, 36 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE SAME AS BASE.		PRICE INCREASED—concluded.	
Saws: crosscut, Disston	100.0	Files: 8-inch mill bastard	122.1
Trowels: M. C. O., brick, 10½-inch	100.0	Spelter: Western	123.5
PRICE INCREASED.		Butts: loose joint, cast, 3 x 3 inch	126.6
Shovels: Ames No. 2	102.0	Hammers: Maydole No. 1½	129.0
Copper wire: bare	102.3	Steel billets	129.7
Steel rails	107.4	Doorknobs: steel, bronze plated	132.6
Axes: M. C. O., Yankee	107.6	Vises: solid box, 50-lb	132.7
Lead pipe	107.8	Pig iron: foundry No. 1	134.5
Barb wire: galvanized	108.4	Pig iron: Bessemer	137.7
Locks: common mortise	110.2	Angers: extra, 1-inch	143.7
Copper: ingot, lake	110.9	Pig iron: gray forge, Southern, coke	146.4
Lead: pig	112.3	Pig iron: foundry No. 2	146.6
Zinc: sheet	113.3	Chisels: extra, socket firmer, 1-inch	147.8
Quicksilver	113.4	Tin: pig	153.4
Copper: sheet, hot-rolled (base sizes)	115.6	PRICE DECREASED.	
Planes: Bailey No. 5	115.7	Saws: hand, Disston No. 7	96.6
Nails: cut, 8-penny, fence and common ..	120.2	Nails: wire, 8-penny, fence and common ..	96.0
Bar iron: best refined, from store (Philadelphia market)	122.0	Silver: bar, fine	72.4
Bar iron: best refined, from mill (Pittsburg market)	122.1	Wood screws: 1-inch, No. 10, flat head ..	72.4
		Average for metals and implements	117.7

Lumber and building materials, 26 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Cement: Rosendale	100.3	Doors: pine	156.2
Brick: common domestic	106.2	Poplar	156.3
Carbonate of lead: American, in oil	106.6	Turpentine: spirits of	171.0
Pine: yellow	113.7	Pine: white, boards, uppers	171.8
Oxide of zinc	115.8	PRICE DECREASED.	
Window glass: American, single, thirds, 6 x 8 to 10 x 15 inch	118.7	Lime: common	94.5
Maple: hard	119.5	Linseed oil: raw	91.9
Oak: white, plain	119.8	Shingles: cypress	91.0
Window glass: American, single, firsts, 6 x 8 to 10 x 15 inch	122.7	Putty	89.2
Shingles: white pine	125.1	Plate glass: polished, unsilvered, area 5 to 10 square feet	83.1
Spruce	133.7	Plate glass: polished, unsilvered, area 3 to 5 square feet	72.3
Oak: white, quartered	139.3	Average for lumber and building materials	122.2
Tar	139.4		
Pine: white, boards, No. 2 barn	140.3		
Hemlock	140.4		
Resin: good, strained	153.9		

RELATIVE PRICES, 1903 COMPARED WITH AVERAGE PRICE FOR 1890-1899—Concluded.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Drugs and chemicals, 9 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Quinine: American.....	102.6	Muriatic acid: 20°.....	153.8
Glycerin: refined.....	103.4		
Alum: lump.....	103.6	PRICE DECREASED.	
Alcohol: grain, 94 per cent.....	106.9	Alcohol: wood, refined, 95 per cent.....	62.0
Brimstone: crude, seconds.....	107.9		
Opium: natural, in cases.....	130.6	Average for drugs and chemicals..	112.6
Sulphuric acid: 66°.....	142.7		

House furnishing goods, 14 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Table cutlery: knives and forks, coco-bolo handles.....	107.3	Glassware: nappies, 4-inch.....	125.0
Earthenware: teacups and saucers, white granite.....	107.4	Furniture: chairs, bedroom, maple.....	127.8
Wooden ware: tubs, oak-grained.....	107.6	Furniture: chairs, kitchen.....	130.7
Furniture: tables, kitchen.....	108.1		
Glassware: pitchers, 1-gallon, common.....	110.6	PRICE DECREASED.	
Earthenware: plates, white granite.....	111.4	Glassware: tumblers, 1-pint, common.....	99.5
Furniture: bedroom sets, ash.....	115.3	Table cutlery: carvers, stag handles.....	93.8
Earthenware: plates, cream-colored.....	115.4		
Wooden ware: pails, oak-grained.....	122.2	Average for house furnishing goods..	113.0

Miscellaneous, 13 articles.

Article.	Relative price, 1903.	Article.	Relative price, 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Malt: Western made.....	103.1	Jute: raw.....	129.2
Proof spirits.....	111.4	Cotton-seed oil: summer yellow, prime.....	130.7
Tobacco: smoking, granulated, Seal of North Carolina.....	112.0		
Rubber: Para Island.....	113.1	PRICE DECREASED.	
Tobacco: plug, Hornshoe.....	113.6	Paper: wrapping, manila.....	95.1
Soap: castile, mottled, pure.....	115.6	Paper: news.....	84.6
Cotton-seed meal.....	121.6		
Rope: manila.....	122.7	Average for miscellaneous.....	113.6
Starch: laundry.....	123.9		

The farm products group was 18.8 per cent higher in 1903 than the average price for the ten years, 1890 to 1899, only 4 of the 16 articles being lower in 1903 than the average price for 1890 to 1899.

The 1903 price, compared with the average price for 1890 to 1899, shows hops to be 59.5 per cent above; cotton, 44.7 per cent above; heavy hogs, 37.3 per cent above; light hogs, 37 per cent above; oats, 31.7 per cent above; hides, 24.8 per cent above; barley, 21.2 per cent above; corn, 21.1 per cent above, etc. Flaxseed in 1903 was 5.9 per cent below the average price for 1890 to 1899; rye, 2.5 per cent below; sheep, Western, 2 per cent below, and sheep, native, 1.3 per cent below.

Considering the articles shown in this table, it is seen that the food group was 6.6 per cent higher in 1903 than the average price for 1890 to 1899. Thirty-five of the 53 articles considered in this table were higher and 18 lower than the average price for 1890 to 1899.

In 1903 pepper was 72.1 per cent above the average price for 1890 to 1899; herring, 51.7 per cent above; mess pork, 43.1 per cent above; bacon, short rib sides, 43 per cent above; bacon, short clear sides, 42.1 per cent above; beans, 35.5 per cent above; lard, 34.1 per cent above; smoked hams, 29.2 per cent above; currants, 26.9 per cent above; yellow corn meal, 25.7 per cent above; white corn meal, 23.7 per cent above; mackerel, 23.5 per cent above, etc. Coffee was 57.4 per cent below the average price for 1890 to 1899; winter wheat flour, 6.6 per cent below; granulated sugar, 1.8 per cent below, etc.

Of the 70 articles considered in the cloths and clothing group 56 were in 1903 above and 14 below the average price for 1890 to 1899.

In 1903 bleached sheetings, 10-4, Pepperell, were 20.8 per cent above the average price for 1890 to 1899; worsted yarns, XXX, were 20.4 per cent above; cotton thread, 20.1 per cent above; Ohio fine fleece wool, 18.5 per cent above, etc.

Men's hose, 160 needles, were 17.9 per cent below the average price for 1890 to 1899; women's hosiery, 160 to 176 needles, 13.2 per cent below; men's vici kid shoes, 13 per cent below, etc.

Of the 13 articles included in the fuel and lighting group in 1903, only one article, matches, was below the average price for 1890 to 1899. The average price for the group was 49.3 per cent above the average for 1890 to 1899.

Georges Creek coal at the mine was 169.6 per cent above the average price for 1890 to 1899; this relative price is based on the open market price of the coal. Crude petroleum was 74.5 per cent above the average price for 1890 to 1899. The contract price of Connellsville coke was 71.5 per cent above the average price for 1890 to 1899. Georges Creek bituminous coal, f. o. b. New York Harbor, was 61.8 per cent above the average price for 1890 to 1899; 150° refined petroleum, 53.1 per cent above; Pittsburg bituminous coal, 43.9 per cent above; anthracite coal, egg size, 34.3 per cent above; chestnut size, 34.2 per cent above, etc.

Thirty-six articles are considered in the metals and implements group. Two were the same price in 1903, 30 were above, and 4 were below the average price for 1890 to 1899. Pig tin was 53.4 per cent above the average for 1890 to 1899; chisels, 47.8 per cent above; pig iron, foundry No. 2, 46.6 per cent above; gray forge, Southern, 46.4 per cent above; Bessemer, 37.7 per cent above; foundry No. 1, 34.5 per cent above; steel billets 29.7 per cent above, etc.

Wood screws and bar silver were each 27.6 per cent below the average for 1890 to 1899; wire nails were 4 per cent below, and Disston No. 7 hand saws, 1.4 per cent below.

Of the 26 articles considered in the lumber and building materials group, 20 were above and 6 were below the average price for 1890 to 1899. White pine boards, uppers, were 71.8 per cent above the average price for 1890 to 1899; spirits of turpentine, 71 per cent above; poplar, 58.3 per cent above; pine doors, 58.2 per cent above, etc. Plate glass, area 3 to 5 square feet, was 27.7 per cent below the average price for 1890 to 1899; plate glass, area 5 to 10 square feet, 16.9 per cent below; putty, 10.8 per cent below, etc.

Nine articles are included in the group of drugs and chemicals, and only one, wood alcohol, shows the 1903 price lower than the average price for 1890 to 1899.

Of the 14 articles in the group of house furnishing goods, the 1903 price of 12 articles was above the average price for 1890 to 1899, and the price of 2 articles was below that average.

Thirteen articles are included in the miscellaneous group, and prices of only 2 of that number were in 1903 below the average price for 1890 to 1899.

The facts presented in the foregoing table are summarized in the following, which shows the changes in prices of articles in each group, classified by per cent of change:

CHANGES IN PRICES OF ARTICLES IN EACH GROUP, CLASSIFIED BY PER CENT OF CHANGE, 1903 COMPARED WITH AVERAGE PRICE FOR 1890-1899.

Groups.	Number of articles.	Price increased.				Price same as base.	Price decreased.			
		100 per cent or more.	50 to 100 per cent.	25 to 50 per cent.	10 to 25 per cent.		Less than 10 per cent.	10 to 25 per cent.	25 to 50 per cent.	50 per cent or more.
Farm products	16	.....	1	4	4	3	.....	4	.....	.....
Food, etc.	53	.....	2	8	12	13	.....	8	5	4
Cloths and clothing	70	.....	.....	.....	25	31	.....	10	4	.....
Fuel and lighting	13	1	4	7	.....	.....	.....	1	.....	.....
Metals and implements	36	.....	1	11	12	6	2	2	.....	2
Lumber and building materials	26	.....	5	6	6	3	.....	3	2	1
Drugs and chemicals	9	.....	1	2	.....	5	.....	.....	1	.....
House furnishing goods	14	.....	.....	3	5	4	.....	2	.....	.....
Miscellaneous	13	.....	.....	2	8	1	.....	1	1	.....
Total	250	1	14	43	72	66	2	30	13	8

It is seen in the above comparison of the prices of 1903 with the average for 1890 to 1899 that of the 16 articles in the farm products group, 12 show an increase and 4 a decrease; of the 53 in the food, etc., group, 35 show an increase and 18 a decrease; of the 70 in the cloths and clothing group, 56 show an increase and 14 show a decrease; of the 13 in the fuel and lighting group, 12 show an increase and 1 a

decrease; of the 36 in the metals and implements group, 30 show an increase, 2 show the same price as the average for the base period, and 4 show a decrease; of the 26 in the lumber and building materials group, 20 show an increase and 6 a decrease; of the 9 in the drugs and chemicals group, 8 show an increase and 1 a decrease; of the 14 in the house furnishing goods group, 12 show an increase and 2 a decrease; of the 13 in the miscellaneous group, 11 show an increase and 2 a decrease. Of the 250 commodities, for which prices were secured for the whole period from 1890 to 1903, 196 show an increase, 2 show the same price as the average for the base period, and 52 show a decrease.

The number of articles according to classified per cents of increase and decrease is also shown in this table. Of the 196 commodities that showed an increase in 1903 over the average for 1890 to 1899, 66 advanced less than 10 per cent, 72 advanced from 10 to 25 per cent, 43 advanced from 25 to 50 per cent, 14 advanced from 50 to 100 per cent, and 1 advanced 100 per cent or more. Of the 52 commodities which showed a decrease, 30 decreased less than 10 per cent, 13 decreased from 10 to 25 per cent, 8 decreased from 25 to 50 per cent, and 1 decreased 50 per cent or more.

The number and per cent of articles which showed each specified increase or decrease are given in the following table:

NUMBER AND PER CENT OF ARTICLES, BY CLASSIFIED PER CENT OF INCREASE OR DECREASE, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

	Number of articles.	Per cent of articles.		Number of articles.	Per cent of articles.
Price increased:			Price decreased:		
100 per cent or more.....	1	0.4	Less than 10 per cent.....	30	12.0
50 to 100 per cent.....	14	5.6	10 to 25 per cent.....	13	5.2
25 to 50 per cent.....	43	17.2	25 to 50 per cent.....	8	3.2
10 to 25 per cent.....	72	28.8	50 per cent or more.....	1	.4
Less than 10 per cent.....	66	28.4			
Total.....	196	78.4	Total.....	52	20.8
Price same as base.....	2	.8	Grand total.....	250	100.0

Of the 250 articles for which prices were secured for the whole period from 1890 to 1903, it is seen that 196, or 78.4 per cent, show an increase in price; 2 articles, or 0.8 per cent, show the same price as the average for the base period, and 52 articles, or 20.8 per cent, show a decrease in price in 1903, as compared with the average price for the base period.

Of the 260 commodities considered in this compilation of prices, the average price of 139 commodities was higher in 1903 than in 1902, the average price of 25 was the same in 1903 as in 1902, and the average price of 96 was lower in 1903 than in 1902.

To assist in making easy a comparison of 1903 prices of the general groups and of all commodities with prices of the other years, the following table has been prepared, showing the per cent of increase of 1903 prices over the prices of each year from 1890 to 1902.

PER CENT OF INCREASE IN WHOLESALE PRICES OF THE GENERAL GROUPS OF COMMODITIES IN 1903 OVER PRICES IN PREVIOUS YEARS.

Groups.	Per cent of increase in 1903 over —												
	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Farm products.....	8.0	22.2	6.4	10.1	23.9	27.3	51.7	39.4	23.6	18.8	8.5	1.6	9.0
Food, etc.....	4.7	7.4	3.4	2.8	7.3	13.2	27.8	22.1	13.5	9.0	2.8	1.1	3.8
Cloths and clothing.....	6.1	4.2	2.2	4.6	10.9	15.0	16.8	17.0	14.1	10.2	2.2	5.5	4.5
Fuel and lighting.....	42.6	45.4	47.7	49.3	61.6	52.2	43.1	54.9	56.5	42.2	23.5	24.9	11.2
Metals and imple- ments.....	1.3	5.3	10.9	16.8	29.7	27.8	25.5	35.8	36.1	2.5	2.4	5.1	.3
Lumber and build- ing materials.....	8.6	12.0	18.1	19.1	26.1	29.0	30.0	34.3	26.7	14.7	4.9	4.0	2.2
Drugs and chemi- cals.....	2.2	8.7	9.4	12.0	25.4	28.1	21.6	19.3	5.6	1.2	2.7	2.3	1.4
House furnishing goods.....	1.7	2.5	6.1	7.7	12.9	17.1	20.2	25.8	22.8	18.8	6.5	1.9	.7
Miscellaneous.....	3.0	3.8	7.0	7.3	13.8	20.2	24.3	23.3	22.9	16.3	3.5	5.8	4.4
All commodi- ties.....	.6	1.7	7.1	7.6	18.2	21.4	25.7	26.6	21.6	11.7	2.8	4.7	.6

a Decrease.

From this table it is seen that the group farm products in 1903 was 8 per cent higher than in 1890, 2.2 per cent lower than in 1891, 6.4 per cent higher than in 1892, 10.1 per cent higher than in 1893, 23.9 per cent higher than in 1894, 27.3 per cent higher than in 1895, 51.7 per cent higher than in 1896, 39.4 per cent higher than in 1897, 23.6 per cent higher than in 1898, 18.8 per cent higher than in 1899, 8.5 per cent higher than in 1900, 1.6 per cent higher than in 1901, and 9 per cent lower than in 1902.

The average for all commodities combined in 1903 was 0.6 per cent higher than in 1890, 1.7 per cent higher than in 1891, 7.1 per cent higher than in 1892, 7.6 per cent higher than in 1893, 18.2 per cent higher than in 1894, 21.4 per cent higher than in 1895, 25.7 per cent higher than in 1896, 26.6 per cent higher than in 1897, 21.6 per cent higher than in 1898, 11.7 per cent higher than in 1899, 2.8 per cent higher than in 1900, 4.7 per cent higher than in 1901, and 0.6 per cent higher than in 1902.

In the following table the December, 1903, relative price is compared with the average for 1890 to 1899. The average price for 1890 to 1899 is in every case the base or 100 per cent. Only the 250 commodities for which quotations were secured for the whole period of fourteen years have been included. In using this table it must be borne in mind that the comparison is between the prices for December, 1903, and the average prices for the base period.

RELATIVE PRICES, DECEMBER, 1908, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Farm products, 16 articles.

Article.	Relative price, Dec., 1908.	Article.	Relative price, Dec., 1908.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Hogs: light.....	101.7	Cotton: upland, middling.....	164.6
Hogs: heavy.....	103.1	Hops: New York State, choice.....	175.0
Cattle: steers, good to choice.....	104.3	PRICE DECREASED.	
Cattle: steers, choice to extra.....	104.5	Rye: No. 2, cash.....	97.7
Hay: timothy, No. 1.....	106.9	Flaxseed: No. 1.....	84.7
Corn: No. 2, cash.....	110.1	Sheep: native.....	81.4
Wheat: contract grades, cash.....	110.6	Sheep: Western.....	80.3
Hides: green, salted, packers, heavy native steers.....	115.9	Average for farm products.....	
Barley: by sample.....	128.9		112.2
Oats: cash.....	130.7		

Food, etc., 53 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Butter: dairy, New York State.....	100.3	Milk: fresh.....	127.5
Flour: wheat, winter straights.....	100.4	Beans: medium, choice.....	130.2
Bread: loaf (Washington market).....	100.5	Fish: herring, shore, round.....	139.0
Bread: loaf, homemade (N. Y. market).....	101.0	Fruit: currants, in barrels.....	140.0
Bread: loaf, Vienna (N. Y. market).....	101.0	Spices: pepper, Singapore.....	172.0
Salt: Ashton's.....	102.1	Eggs: new-laid, fancy, near-by.....	193.6
Vegetables, fresh: onions.....	103.0	PRICE DECREASED.	
Bread: crackers, Boston X.....	104.0	Flour: rye.....	98.7
Flour: wheat, spring patents.....	104.5	Fruit: raisins, California, London layer.....	95.6
Meat: beef, salt, extra mess.....	106.0	Meat: beef, fresh, native sides.....	95.6
Molasses: New Orleans, open kettle, prime.....	106.3	Starch: pure corn.....	93.6
Salt: American.....	106.5	Sugar: 95° centrifugal.....	92.9
Lard: prime contract.....	106.7	Sugar: granulated.....	92.0
Meat: bacon, short clear sides.....	108.4	Tea: Formosa, fine.....	91.6
Meat: bacon, short rib sides.....	108.7	Sugar: 89° fair refining.....	91.2
Butter: creamery, extra (N. Y. market).....	108.8	Bread: crackers, soda.....	90.5
Fish: mackerel, salt, large No. 8s.....	109.7	Vinegar: cider, Monarch.....	88.0
Meal: corn, fine white.....	109.7	Rice: domestic, choice.....	87.0
Tallow.....	111.5	Meat: mutton, dressed.....	84.2
Butter: creamery, Elgin (Elgin market).....	112.9	Fruit: apples, sun-dried, Southern, sliced.....	72.8
Meat: hams, smoked.....	113.3	Fruit: apples, evaporated, choice.....	72.4
Meat: pork, salt, mess, old to new.....	114.1	Fruit: prunes, California, in boxes.....	67.8
Fish: salmon, canned.....	117.1	Spices: nutmegs.....	67.1
Flour: buckwheat.....	117.1	Soda: bicarbonate of, American.....	64.6
Meat: beef, salt, hams, Western.....	117.5	Coffee: Rio No. 7.....	49.5
Meal: corn, fine yellow.....	118.0	Average for food, etc.....	
Fish: cod, dry, bank, large.....	118.6		105.2
Cheese: New York State, full cream.....	121.6		
Vegetables, fresh: potatoes, Burbank.....	126.2		

Cloths and clothing, 70 articles.

PRICE INCREASED.		PRICE INCREASED—continued.	
Ginghams: Lancaster.....	100.8	Women's dress goods: alpaca, cotton warp, 22-inch, Hamilton.....	104.6
Women's dress goods: cashmere, cotton warp, 22-inch, Hamilton.....	100.3	Shirts: bleached, 4-4, Wamsutta ^{<0>} _{xx}	105.2
Underwear: shirts and drawers, white, all wool, full-fashioned, 18-gauge.....	100.4	Women's dress goods: cashmere, cotton warp, 27-inch, Hamilton.....	106.4
Shirts: bleached, 4-4, New York Mills.....	102.3	Wool: Ohio, medium fleece (1 and 1/2 grade), scoured.....	106.3
Silk: raw, Italian, classical.....	102.6	Shirts: bleached, 4-4, Lonsdale.....	106.6
Overcoatings: chinchilla, Brough, all wool.....	103.1	Sheetings: bleached, 10-4, Wamsutta B.T.....	106.8
Ginghams: Amoskeag.....	108.2		

RELATIVE PRICES, DECEMBER, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Cloths and clothing, 70 articles—Concluded.

Article.	Relative price, Dec., 1903.	Article.	Relative price, Dec., 1903.
PRICE INCREASED—continued.		PRICE INCREASED—concluded.	
Leather: sole, oak	107.0	Leather: sole, hemlock, nonacid, Buenos Ayres, middle weights, 1st quality	118.6
Leather: wax calf, 30 to 40 pounds to the dozen, B grade	107.0	Worsted yarns: 2-40s, XXX or the equivalent in quality, white, in skeins (c)	119.2
Shawls: standard, all wool, 72 x 144 inch, 42-ounce, made of high-grade wool	107.0	Cotton flannels: 3½ yards to the pound	119.7
Bags: 2-bushel, Amoskeag	107.2	Sheeting: brown, 4-4, Indian Head	119.8
Shirtings: bleached, 4-4, Fruit of the Loom	108.2	Drillings: 30-inch, Stark A	120.0
Tickings: Amoskeag A. C. A.	108.4	Print cloths: 28-inch, 64x64	120.0
Suitings: indigo blue, all wool, 64-inch, 14-ounce, Middlesex standard	108.8	Cotton thread: 6-cord, 200-yard spools, J. & F. Coats	120.1
Carpets: ingrain, 2-ply, Lowell	109.1	Cotton flannels: 2½ yards to the pound	120.4
Boots and shoes: women's solid grain shoes, leather, polish or polka	110.0	Sheetings: brown, 4-4, Atlantic A	121.7
Blankets: 11-4, 5 pounds to the pair, all wool	110.1	Wool: Ohio, finefleeces (X and XX grade), scoured	125.1
Brodcloths: first quality, black, 54-inch, made from XXX wool	110.3	Sheetings: bleached, 10-4, Pepperell	127.4
Carpets: Brussels, 5-frame, Bigelow	110.3	Cotton yarns: carded, white, mule-spun, Northern, cones, 10/1	127.5
Leather: harness, oak	110.4	PRICE DECREASED.	
Sheetings: brown, 4-4, Stark A. A (a)	110.4	Calico: Cochecho prints	99.5
Carpets: Wilton, 5-frame, Bigelow	110.7	Boots and shoes: men's calf bal. shoes, Goodyear welt, dongola top	98.9
Women's dress goods: Franklin sackings, 6-4	110.7	Linen thread: 8-cord, 200-yard spools, Barbour	98.2
Shirtings: bleached, 4-4, Hope	111.3	Linen shoe thread: 10s, Barbour	96.7
Suitings: indigo blue, all wool, 16-ounce	112.6	Underwear: shirts and drawers, white, merino, full-fashioned, 52 per cent wool, 48 per cent cotton, 21-gauge (d)	95.4
Women's dress goods: cashmere, cotton warp, 9-twill, 4-4, Atlantic Mills F	112.8	Overcoatings: covert cloth, light weight, staple goods	94.0
Worsted yarns: 2-40s, Australian fine	112.9	Boots and shoes: men's brogans, split	93.5
Boots and shoes: men's split boots, kip top, 16-inch, ½ double sole (b)	113.1	Silk; raw, Japan, flatures	92.9
Sheetings: brown, 4-4, Pepperell R	113.4	Hosiery: men's cotton half hose, seamless, standard quality, 84 needles	92.4
Drillings: brown, Pepperell	113.6	Overcoatings: chinchilla, cotton warp, C. C. grade	90.1
Blankets: 11-4, 5 pounds to the pair, cotton warp, all wool filling	114.2	Boots and shoes: men's vicl kid shoes, Goodyear welt	87.0
Denims: Amoskeag	114.9	Hosiery: women's cotton hose, seamless, fast black, 26 to 28 ounce, 160 to 176 needles	86.8
Sheetings: bleached, 10-4, Atlantic	115.1	Hosiery: men's cotton half hose, seamless, fast black, 20 to 22 ounce, 160 needles	82.1
Cotton yarns: carded, white, mule-spun, Northern, cones, 22/1	116.8	Average for cloths and clothing	
Women's dress goods: cashmere, all wool, 10-11 twill, 38-inch, Atlantic Mills J	117.2		108.5
Overcoatings: beaver, Moscow, all wool, black	117.3		
Flannels: white, 4-4, Ballard Vale No. 3	117.6		
Horse blankets: 6 pounds each, all wool	117.8		
Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling	117.9		

Fuel and lighting, 13 articles.

Article.	Relative price, Dec., 1903.	Article.	Relative price, Dec., 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Candles: adamantine, 6s, 14-ounce	115.1	Coal: bituminous, Georges Creek (at mine)	196.9
Coal: anthracite, broken	127.0	Petroleum: crude	207.0
Coal: anthracite, stove	130.4	PRICE DECREASED.	
Coal: bituminous, Georges Creek (f. o. b. New York Harbor)	133.1	Coke: Connellsville, furnace	92.7
Coal: anthracite, chestnut	137.7	Matches: parlor, domestic	86.4
Coal: anthracite, egg	137.7	Average for fuel and lighting	
Coal: bituminous, Pittsburg (Youghiogheny)	140.0		139.8
Petroleum: refined, for export	146.4		
Petroleum: refined, 150° fire test, w. w.	168.5		

a In 1902 and 1903 quotations are for Massachusetts Mills, Flying Horse brand.

b In 1903, russet bound top, 17-inch, ½ double sole.

c In 1902 and 1903 designated as XXXX.

d In 1903, 60 per cent wool, 40 per cent cotton.

RELATIVE PRICES, DECEMBER, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Metals and implements, 36 articles.

Article.	Relative price, Dec., 1903.	Article.	Relative price, Dec., 1903.
PRICE SAME AS BASE.		PRICE INCREASED—concluded.	
Saws: crosscut, Disston	100.0	Vises: solid box, 50-lb	117.9
Trowels: M. C. O., brick, 10½-inch	100.0	Files: 8-inch mill bastard	123.1
PRICE INCREASED.		Butts: loose joint, cast, 3 x 3 inch	126.6
Shovels: Ames No. 2	102.0	Hammers: Maydole No. 1½	129.0
Barb wire: galvanized	102.9	Doorknobs: steel, bronze plated	132.6
Bar iron: best refined, from store (Philadelphia market)	104.3	Tin: pig	141.1
Pig iron: Bessemer	104.5	Augers: extra, 4-inch	143.7
Lead pipe	105.8	Chisels: extra, socket firmer, 1-inch	147.8
Axes: M. C. O., Yankee	106.5	PRICE DECREASED.	
Steel billets	106.8	Zinc: sheet	99.6
Pig iron: foundry No. 1	107.1	Copper: ingot, lake	99.3
Pig iron: foundry No. 2	107.3	Saws: hand, Disston No. 7	98.6
Steel rails	107.4	Pig iron: gray forge, Southern, coke	98.1
Copper: sheet, hot-rolled (base sizes)	108.5	Copper wire: bare	97.3
Nails: cut, 8-penny, fence and common	109.4	Nails: wire, 8-penny, fence and common	92.5
Locks: common mortise	110.2	Bar iron: best refined, from mill (Pittsburg market)	89.7
Lead: pig	111.5	Wood screws: 1-inch, No. 10, flat head	76.2
Quicksilver	112.6	Silver: bar, fine	74.8
Planes: Bailey No. 5	115.7	Average for metals and implements.	
Spelter: Western	116.2		109.1

Lumber and building materials, 26 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Carbonate of lead: American, in oil	101.9	Pine: white, boards, uppers	171.8
Pine: yellow	113.7	Turpentine: spirits of	177.2
Oxide of zinc	115.8	Resin: good, strained	178.8
Oak: white, plain	124.2	PRICE DECREASED.	
Maple: hard	124.5	Lime: common	97.2
Shingles: white pine	125.1	Cement: Rosendale	93.8
Doors: pine	128.1	Shingles: cypress	92.2
Brick: common domestic	130.3	Linseed oil: raw	81.6
Window glass: American, single, thirds, 6x8 to 10x15 inch	133.6	Plate glass: polished, unsilvered, area 5 to 10 square feet	75.1
Window glass: American, single, firsts, 6x8 to 10x15 inch	138.0	Putty	71.5
Pine: white, boards, No. 2 barn	140.3	Plate glass: polished, unsilvered, area 3 to 5 square feet	66.1
Hemlock	142.1	Average for lumber and building materials	
Spruce	142.9		124.5
Tar	149.4		
Oak: white, quartered	153.7		
Poplar	165.0		

Drugs and chemicals, 9 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Quinine: American	101.6	Muriatic acid: 20°	153.8
Glycerin: refined	101.9	PRICE DECREASED.	
Alum: lump	104.8	Alcohol: wood, refined, 95 per cent	52.4
Brimstone: crude, seconds	106.3	Average for drugs and chemicals	
Alcohol: grain, 94 per cent	108.9		111.4
Opium: natural, in cases	127.1		
Sulphuric acid: 66°	146.1		

House furnishing goods, 14 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Table cutlery: knives and forks, cocobolo handles	107.8	Furniture: chairs, bedroom, maple	129.1
Earthenware: teacups and saucers, white granite	107.4	Furniture: chairs, kitchen	130.7
Wooden ware: tubs, oak-grained	107.6	Wooden ware: palls, oak-grained	130.9
Furniture: tables, kitchen	108.1	PRICE DECREASED.	
Glassware: pitchers, 4-gallon, common	110.6	Glassware: tumblers, 4-pint, common	95.5
Earthenware: plates, white granite	111.4	Table cutlery: carvers, stag handles	95.5
Earthenware: plates, cream-colored	115.4	Average for house furnishing goods	
Furniture: bedroom sets, ash	116.1		113.6
Glassware: napkins, 4-inch	116.0		

RELATIVE PRICES, DECEMBER, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Concluded.

[For a more detailed description of the articles see Table I, page 270 et seq.]

Miscellaneous, 13 articles.

Article.	Relative price, Dec., 1903.	Article.	Relative price, Dec., 1903.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Malt: Western made.....	100.3	Starch: laundry.....	122.1
Cotton-seed oil: summer yellow, prime..	110.1	Rope: manila.....	123.1
Proof spirits.....	110.2	PRICE DECREASED.	
Tobacco: smoking, granulated, Seal of North Carolina.....	112.0	Paper: wrapping, manila.....	96.0
Soap: castile, mottled, pure.....	112.1	Paper: news.....	83.6
Tobacco: plug, Hornshoe.....	113.6	Average for miscellaneous.....	
Rubber: Para Island.....	114.3		110.1
Jute: raw.....	115.0		
Cotton-seed meal.....	119.5		

The farm products group was 12.2 per cent higher in December, 1903, than the average price for the ten years, 1890 to 1899, four of the 16 articles being lower in that month than the average price for 1890 to 1899.

The December, 1903, price, compared with the average price for 1890 to 1899, shows hops 75 per cent above; cotton, 64.6 per cent above; oats, 30.7 per cent above, etc. Western sheep were 19.7 per cent below the average price for 1890 to 1899; native sheep, 18.6 per cent below, etc.

In December, 1903, the food group was 5.2 per cent higher than the average price for the ten years, 1890 to 1899. Eggs were 93.6 per cent above the average price for 1890 to 1899; pepper, 72 per cent above; potatoes, 26.2 per cent above; spring wheat flour, 4.5 per cent above, etc. Coffee was 50.5 per cent below; mutton, 15.8 per cent below, etc.

For the other groups of articles, the reader is referred to the table.

The facts presented in the foregoing table are summarized in the following, which shows the changes in prices of articles in each group, classified by per cent of change:

CHANGES IN PRICES OF ARTICLES IN EACH GROUP, CLASSIFIED BY PER CENT OF CHANGE, DECEMBER, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

Groups.	Number of articles.	Price increased.					Price same as base.	Price decreased.				
		100 per cent or more.	50 to 100 per cent.	25 to 50 per cent.	10 to 25 per cent.	Less than 10 per cent.		Less than 10 per cent.	10 to 25 per cent.	25 to 50 per cent.	50 per cent or more.	
Farm products.....	16		2	1	4	5		1	3			
Food, etc.....	53		2	5	10	18		9	3	5	1	
Cloths and clothing.....	70				33	21		10	3			
Fuel and lighting.....	13	1	2	7	1			1	1			
Metals and implements.....	36			6	7	12	2	6	2	1		
Lumber and building materials.....	26		5	9	4	1		3	2	2		
Drugs and chemicals.....	9		1	2		5				1		
House furnishing goods.....	14			4	4	4		2				
Miscellaneous.....	13				10	1		1	1			
Total.....	250	1	12	37	73	67	2	33	15	9	1	

It is seen in the above comparison of the prices of December, 1903, with the average for 1890 to 1899, that of the 16 articles in the farm products group, 12 show an increase and 4 a decrease; of the 53 in the food, etc., group, 35 show an increase and 18 a decrease; of the 70 in the cloths and clothing group, 57 show an increase and 13 a decrease; of the 13 in the fuel and lighting group, 11 show an increase and 2 a decrease; of the 36 in the metals and implements group, 25 show an increase, 2 show the same price as the average for the base period, and 9 show a decrease; of the 26 in the lumber and building materials group, 19 show an increase and 7 a decrease; of the 9 in the drugs and chemicals group, 8 show an increase and 1 a decrease; of the 14 in the house furnishing goods group, 12 show an increase and 2 a decrease; of the 13 in the miscellaneous group, 11 show an increase and 2 a decrease. Of the 250 commodities, for which prices were secured for the whole period from 1890 to 1903, 190 show an increase, 2 show the same price as the average for the base period, and 58 show a decrease.

The number of articles according to classified per cents of increase and decrease is also shown in this table. Of the 190 commodities that showed an increase in December, 1903, over the average for 1890 to 1899, 67 advanced less than 10 per cent, 73 advanced from 10 to 25 per cent, 37 advanced from 25 to 50 per cent, 12 advanced from 50 to 100 per cent, and 1 advanced 100 per cent or more. Of the 58 commodities which showed a decrease, 33 decreased less than 10 per cent, 15 decreased from 10 to 25 per cent, 9 decreased from 25 to 50 per cent, and 1 decreased 50 per cent or more.

The number and per cent of articles which showed each specified increase or decrease are given in the following table:

NUMBER AND PER CENT OF ARTICLES, BY CLASSIFIED PER CENT OF INCREASE OR DECREASE, DECEMBER, 1903, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

	Number of articles.	Per cent of articles.		Number of articles.	Per cent of articles.
Price increased:			Price decreased:		
100 per cent or more.....	1	0.4	Less than 10 per cent	33	13.2
50 to 100 per cent.....	12	4.8	10 to 25 per cent.....	15	6.0
25 to 50 per cent.....	37	14.8	25 to 50 per cent.....	9	3.6
10 to 25 per cent.....	73	29.2	50 per cent or more.....	1	.4
Less than 10 per cent.....	67	26.8			
Total.....	190	76.0	Total.....	58	23.2
Price same as base.....	2	.8	Grand total.....	250	100.0

Of the 250 articles for which prices were secured for the whole period from 1890 to 1903, it is seen that 190, or 76 per cent, show an increase in price; 2 articles, or 0.8 per cent, show the same price as the average for the base period, and 58 articles, or 23.2 per cent, show a decrease in price in December, 1903, as compared with the average price for the base period.

Of the 260 commodities considered in this compilation of prices, the average price of 111 commodities was higher in December, 1903, than in December, 1902, the average price of 49 was the same in December, 1903, as in December, 1902, and the average price of 100 was lower in December, 1903, than in December, 1902.

The following table shows the relative prices of certain related articles, so grouped as to render easy a comparison of the course of their prices during the year 1903:

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES IN 1903.

[Average price for 1890-1899=100.]

Month.	Cattle and cattle products.						Dairy products.		
	Cattle.	Beef, fresh.	Beef, hams.	Beef, mess.	Tallow.	Hides.	Milk.	Butter.	Cheese.
Jan.	111.6	116.3	117.5	131.6	136.8	139.9	137.3	124.3	143.2
Feb.	106.2	103.8	114.7	127.9	137.9	132.7	137.3	118.8	145.7
Mar.	106.9	104.2	114.7	123.2	128.7	126.3	129.8	128.8	146.4
Apr.	106.2	106.2	114.7	119.3	125.1	120.6	122.4	119.6	148.1
May	104.8	104.7	114.7	116.6	120.0	124.4	108.9	99.4	118.1
June	102.6	100.9	111.4	111.5	114.9	126.6	92.5	98.7	107.7
July	102.2	98.6	116.1	104.5	107.1	124.7	88.2	91.4	101.9
Aug.	103.8	97.3	121.6	102.9	104.8	121.8	88.2	87.7	101.3
Sept.	107.7	97.9	123.0	102.9	112.2	127.4	101.2	94.1	112.0
Oct.	107.7	98.2	123.0	105.4	106.4	121.0	111.4	95.2	117.1
Nov.	104.0	97.3	118.8	104.5	103.4	115.8	117.6	102.8	118.4
Dec.	104.4	96.6	117.5	106.0	111.5	115.9	127.5	107.3	121.6
	106.8	101.7	117.2	113.1	117.2	124.8	112.9	106.7	123.3

Hogs and hog products.					Sheep and sheep products.		
Hogs.	Bacon.	Hams, smoked.	Mess pork.	Lard.	Sheep.	Mutton.	Wool.
	149.6	124.2	156.9	158.1	104.6	91.2	108.5
148.3	155.8	128.7	155.3	158.7	114.6	99.5	110.2
157.3	164.1	133.6	158.8	157.5	130.3	116.7	108.5
167.9	163.5	134.6	158.5	154.7	125.4	121.1	106.7
164.6	153.5	132.0	159.0	141.4	123.3	119.4	103.1
147.0	151.3	129.1	157.7	136.9	106.8	113.4	104.9
137.5	140.0	134.0	145.1	120.9	84.1	99.5	112.3
125.9	131.0	136.9	133.8	122.8	86.5	88.7	112.3
126.0	139.9	136.3	129.6	134.4	77.6	86.9	113.1
126.5	135.9	126.3	115.5	112.4	75.3	82.1	113.1
106.4	122.0	122.4	116.0	110.1	71.1	79.6	114.8
102.4	109.6	113.3	114.1	106.7	80.9	84.2	115.7
137.2	142.6	129.2	143.1	134.1	98.4	98.7	110.3

Corn, etc.		Flaxseed, etc.		Rye and rye flour.		Wheat and wheat flour.		Flour, etc.		
Corn.	Gluten, (a)	Flaxseed.	Linseed oil.	Rye.	Rye flour.	Wheat.	Wheat flour.	Wheat flour.	Crack-ers.	Loaf bread.
	123.4	105.6	101.4	92.4	99.5	98.7	90.0	90.0	108.2	100.8
122.2	123.4	106.0	101.4	94.0	97.2	100.4	91.6	91.6	108.2	100.8
114.6	130.4	102.4	101.4	94.9	92.7	97.0	91.3	91.3	108.2	100.8
114.0	135.7	97.9	101.4	95.0	91.2	101.0	90.6	90.6	101.3	100.8
114.3	126.9	98.4	97.0	94.4	89.7	104.0	93.0	93.0	101.3	100.8
114.0	126.9	100.2	97.0	96.4	89.7	104.2	97.4	97.4	101.3	100.8
129.3	126.9	90.3	88.2	95.4	91.9	105.7	98.9	98.9	101.3	100.8
133.8	137.5	85.3	83.8	97.6	91.9	110.7	102.1	102.1	97.3	100.8
136.2	137.5	86.7	81.6	106.1	96.7	113.0	102.5	102.5	97.3	100.8
131.2	137.5	87.4	86.0	108.5	100.2	109.0	102.6	102.6	97.3	100.8
116.8	137.5	84.0	81.6	101.2	100.2	106.2	101.9	101.9	97.3	100.8
112.6	119.9	84.7	81.6	97.7	98.7	110.6	102.5	102.5	97.3	100.8
110.1	119.9	94.1	91.9	97.5	94.9	105.1	97.1	97.1	101.3	100.8
121.1	129.7									

a Average for 1893-1899=100.

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES IN 1933—Concluded.

[Average price for 1890-1899 = 100.]

Month.	Cotton and cotton goods.									
	Cotton: upland, mid-ling.	Bags: 2-busbel, Amos-keag.	Calico: Cochecho prints.	Cotton flannels.	Cotton thread.	Cotton yarns.	Denims.	Drill-ings.	Ging-hams.	Hosiery.
Jan.....	115.0	100.1	90.4	99.0	120.1	99.5	100.6	104.0	101.8	85.8
Feb.....	123.5	100.1	90.4	99.0	120.1	100.8	100.6	108.9	101.8	85.8
Mar.....	130.5	108.6	90.4	99.0	120.1	105.7	103.0	102.4	101.8	85.8
Apr.....	135.4	108.6	90.4	99.0	120.1	104.9	105.4	108.2	101.8	87.3
May.....	147.2	108.6	90.4	102.9	120.1	110.7	105.4	104.7	101.8	87.3
June.....	160.3	108.6	90.4	102.9	120.1	117.2	110.2	110.7	101.8	87.3
July.....	160.4	108.6	90.4	106.9	120.1	122.6	110.2	111.7	101.8	88.1
Aug.....	164.3	108.6	90.4	109.6	120.1	125.0	110.2	115.2	101.8	88.1
Sept.....	158.1	107.2	90.4	112.6	120.1	118.7	110.2	116.6	101.8	90.7
Oct.....	126.4	107.2	90.4	114.3	120.1	112.9	110.2	114.3	101.8	90.7
Nov.....	142.5	107.2	90.4	117.2	120.1	114.4	114.9	114.2	101.8	90.7
Dec.....	164.6	107.2	99.5	120.1	120.1	122.2	114.9	116.8	101.8	90.7
1903.....	144.7	104.2	91.1	106.8	120.1	112.9	108.0	109.9	101.8	90.1

Month.	Cotton and cotton goods.				Wool and woolen goods.					
	Print cloths.	Sheet-ings.	Shirt-ings.	Tick-ings.	Wool.	Blank-ets (all wool).	Broad-cloths.	Carpets.	Flan-nels.	Horse blank-ets.
Jan.....	108.1	108.9	98.8	99.0	108.5	110.1	110.3	106.7	108.8	117.8
Feb.....	114.5	106.1	99.9	99.0	110.2	110.1	110.3	106.7	108.8	117.8
Mar.....	114.5	106.8	99.7	99.0	108.5	110.1	110.3	106.7	111.9	117.8
Apr.....	110.7	106.8	100.9	99.0	106.7	110.1	110.3	106.7	111.9	117.8
May.....	108.8	107.4	101.9	99.0	103.1	110.1	110.3	110.0	111.9	117.8
June.....	114.0	111.3	101.1	103.7	104.9	110.1	110.3	110.0	111.9	117.8
July.....	113.4	113.1	104.4	108.4	112.3	110.1	110.3	110.0	117.6	117.8
Aug.....	113.6	113.9	104.6	108.4	112.3	110.1	110.3	110.0	117.6	117.8
Sept.....	117.8	114.7	107.2	108.4	113.1	110.1	110.3	110.0	117.6	117.8
Oct.....	112.8	115.2	106.2	108.4	113.1	110.1	110.3	110.0	117.6	117.8
Nov.....	114.0	114.9	107.2	108.4	114.8	110.1	110.3	110.0	117.6	117.8
Dec.....	120.0	116.4	106.7	108.4	115.7	110.1	110.3	110.0	117.6	117.8
1903.....	113.3	110.6	103.2	104.1	110.3	110.1	110.3	108.6	114.3	117.8

Month.	Wool and woolen goods.						Hides, leather, and boots and shoes.			Petroleum.	
	Over-coat-ings (all wool).	Shawls.	Suit-ings.	Under-wear (all wool).	Wom-en's dress goods (all wool).	Worst-ed yarns.	Hides.	Leath-er.	Boots and shoes.	Crude.	Re-fined.
Jan.....	110.2	107.0	109.9	100.4	113.3	120.0	139.9	112.4	99.9	167.5	137.0
Feb.....	110.2	107.0	109.9	100.4	113.3	120.0	132.7	109.5	99.9	164.8	136.2
Mar.....	110.2	107.0	109.9	100.4	113.3	120.0	126.3	113.6	99.9	164.8	136.2
Apr.....	110.2	107.0	109.9	100.4	113.3	120.0	120.6	113.5	99.9	165.9	140.2
May.....	110.2	107.0	109.9	100.4	113.3	118.8	124.4	111.4	99.9	166.4	140.2
June.....	110.2	107.0	109.9	100.4	113.3	117.3	126.6	111.4	99.9	164.8	141.7
July.....	110.2	107.0	109.9	100.4	116.3	117.3	124.7	111.0	100.5	167.5	141.7
Aug.....	110.2	107.0	107.7	100.4	116.3	117.3	121.3	114.1	100.5	171.4	141.7
Sept.....	110.2	107.0	107.7	100.4	116.3	117.3	127.4	113.7	100.5	172.8	141.7
Oct.....	110.2	107.0	107.7	100.4	116.3	116.1	121.0	111.5	100.5	185.1	143.7
Nov.....	110.2	107.0	107.7	100.4	114.0	116.1	115.8	111.1	100.5	196.4	158.9
Dec.....	110.2	107.0	107.7	100.4	114.0	116.1	115.9	110.3	100.5	207.0	157.5
1903.....	110.2	107.0	109.0	100.4	114.4	118.0	124.8	112.0	100.2	174.5	142.8

A study of this table shows that of the 6 articles grouped under cattle and cattle products (cattle, fresh beef, beef hams, mess beef, tallow, and hides), all but tallow were lower in February than in January; March compared with February shows mess beef, tallow, and hides lower, hams the same price, and cattle and fresh beef higher; April compared with March shows mess beef, tallow, and hides lower, hams the same price, and cattle and fresh beef higher; May compared with April shows cattle, fresh beef, mess beef, and tallow lower, hams

the same price, and hides higher; June compared with May shows all the articles lower, except hides, which were higher; July compared with June shows all the articles lower, except hams, which were higher; August compared with July shows fresh beef, mess beef, tallow, and hides lower and cattle and hams higher; September compared with August shows all the articles higher, except mess beef, which was the same price; October compared with September shows tallow and hides lower, cattle and hams the same price, and fresh beef and mess beef higher; November compared with October shows all the articles lower; December compared with November shows fresh beef and hams lower and cattle, mess beef, tallow, and hides higher.

The lowest monthly relative price during 1903 for cattle was 102.2 in July, the highest 111.6 in January; the lowest for fresh beef was 96.6 in December, the highest 116.3 in January; the lowest for beef hams was 111.4 in June, the highest 123 in September and October; the lowest for mess beef was 102.9 in August and September, the highest 131.6 in January; the lowest for tallow was 103.4 in November, the highest 137.9 in February; the lowest for hides was 115.8 in November, the highest 139.9 in January. The facts for the other groups may be seen by reference to the table.

In the following table a similar comparison of the course of prices for the 14-year period, 1890 to 1903, is shown by years:

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903.

(Average price for 1890-1899=100.)

Year.	Cattle and cattle products.					Dairy products.			
	Cattle.	Beef, fresh.	Beef, hams.	Beef, mess.	Tallow.	Hides.	Milk.	Butter.	Cheese.
1890....	89.5	89.2	80.4	86.8	105.7	99.6	103.1	100.4	97.1
1891....	109.2	106.2	85.8	104.4	111.0	101.5	104.7	116.1	102.4
1892....	95.4	94.8	80.5	84.8	106.4	92.8	105.1	116.4	107.2
1893....	103.0	105.4	98.6	102.2	125.1	79.9	109.4	121.3	109.0
1894....	96.3	97.0	101.5	101.0	110.3	68.4	103.1	102.2	107.4
1895....	103.7	102.7	95.9	101.4	99.8	109.7	99.2	94.5	94.1
1896....	88.3	90.5	88.1	93.7	78.9	86.6	91.8	82.3	92.0
1897....	99.5	99.7	125.1	95.7	76.3	106.3	92.2	84.1	98.1
1898....	102.2	101.3	118.8	114.2	81.8	122.8	93.7	86.8	83.3
1899....	113.2	108.3	125.6	115.9	104.1	131.8	99.2	95.8	108.9
1900....	111.3	104.3	114.2	121.7	111.5	127.4	107.5	101.7	114.3
1901....	116.6	102.1	112.6	116.3	119.1	132.0	102.7	97.7	102.4
1902....	139.5	125.9	118.0	147.1	144.6	142.8	112.9	112.1	114.1
1903....	105.8	101.7	117.2	113.1	117.2	124.8	112.9	105.7	123.3

Year.	Hogs and hog products.				Sheep and sheep products.			
	Hogs.	Bacon.	Hams, smoked.	Mess pork.	Lard.	Sheep.	Mutton.	Wool.
1890....	89.2	89.3	101.1	104.4	96.8	119.3	123.7	132.1
1891....	99.2	103.7	99.8	97.2	100.9	117.8	114.9	125.8
1892....	115.7	116.6	109.3	99.1	117.9	125.2	121.2	113.2
1893....	148.6	154.7	126.9	157.6	157.5	103.8	106.5	101.6
1894....	112.2	111.8	103.6	121.4	118.2	73.6	80.2	79.1
1895....	96.6	96.3	96.2	101.7	99.8	78.4	82.2	70.1
1896....	78.3	73.1	95.8	76.8	71.7	78.7	82.9	70.6
1897....	82.8	79.9	90.9	76.6	67.4	94.2	96.6	88.7
1898....	85.6	89.4	82.0	84.8	84.1	104.9	98.0	108.3
1899....	91.8	85.8	83.8	80.3	86.0	104.3	94.3	110.8
1900....	115.5	111.5	104.2	107.5	105.5	112.0	95.4	117.7
1901....	134.5	132.3	109.2	134.2	135.3	92.0	89.5	96.6
1902....	155.2	150.3	123.1	154.2	161.9	103.2	97.9	100.8
1903....	127.2	122.6	129.2	143.1	134.1	98.4	96.7	110.3

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100.]

Year.	Corn, etc.			Flaxseed, etc.		Rye and rye flour.		Wheat and wheat flour.		Flour, etc.		
	Corn.	Glucose.(a)	Meal.	Flaxseed.	Linseed oil.	Rye.	Rye flour.	Wheat.	Wheat flour.	Wheat flour.	Crack-ers.	Loaf bread.
1890.....	103.8	.....	100.8	125.5	135.8	103.0	101.4	118.9	120.9	120.9	107.7	100.8
1891.....	151.0	.....	142.0	97.1	106.8	157.6	143.3	123.1	125.6	125.6	107.7	100.8
1892.....	118.3	.....	114.0	91.4	90.0	127.7	121.1	104.9	104.2	104.2	104.8	100.8
1893.....	104.2	124.3	105.8	97.7	102.2	92.6	93.0	90.1	89.3	89.3	100.6	100.8
1894.....	113.7	111.4	105.6	121.6	115.6	88.1	83.8	74.4	77.6	77.6	98.8	100.8
1895.....	104.0	109.2	108.8	111.8	115.6	91.2	94.5	79.9	84.4	84.4	95.6	98.7
1896.....	67.8	81.7	77.4	72.9	81.2	66.5	80.9	85.4	91.2	91.2	94.1	94.4
1897.....	66.9	86.0	76.6	78.1	72.2	74.9	84.6	105.8	110.1	110.1	85.8	100.8
1898.....	82.6	91.8	83.7	99.8	86.5	93.8	92.9	117.8	109.0	109.0	107.3	100.8
1899.....	87.6	95.6	91.2	104.0	94.1	104.4	99.4	94.7	87.9	87.9	99.1	100.8
1900.....	100.2	104.9	97.0	145.7	153.7	97.9	103.3	93.7	88.3	88.3	102.7	100.8
1901.....	130.6	116.0	115.6	145.8	140.0	100.8	100.1	95.7	87.4	87.4	108.2	100.8
1902.....	156.9	153.6	148.2	135.0	130.8	102.5	103.8	98.7	89.7	89.7	108.2	100.8
1903.....	121.1	129.7	124.7	94.1	91.9	97.5	94.9	105.1	97.1	97.1	101.3	100.8

Cotton and cotton goods.										
Year.	Cotton: upland, mid- dling.	Bags: 2-buabel, Amoe- keag.	Calico: Cocheeo prints.	Cotton flannels.	Cotton thread.	Cotton yarns.	Denims.	Drill- ings.	Ging- hams.	Ho- dery.
1890.....	142.9	113.9	117.5	121.8	101.6	111.7	112.5	121.1	119.1	129.7
1891.....	110.8	111.7	104.0	121.8	100.7	112.8	109.6	114.6	122.1	122.8
1892.....	99.0	110.8	117.5	115.9	100.7	117.0	109.6	102.2	122.1	117.4
1893.....	107.2	106.8	113.0	101.4	100.7	110.5	112.5	105.6	114.9	109.4
1894.....	90.2	91.1	99.5	95.7	100.7	98.0	105.4	97.1	89.5	100.8
1895.....	94.0	82.2	94.9	91.7	100.7	92.1	94.6	98.2	87.0	94.4
1896.....	102.0	91.6	94.9	93.9	99.6	98.0	94.6	100.2	88.0	90.5
1897.....	92.2	92.9	90.4	88.6	98.4	90.6	89.2	90.4	84.2	86.7
1898.....	76.9	95.6	81.4	81.0	98.4	90.8	85.9	86.8	88.1	83.4
1899.....	84.7	103.4	87.3	88.0	98.4	88.6	85.8	88.5	89.7	82.5
1900.....	123.8	112.6	94.9	101.6	120.1	115.5	102.8	105.0	96.3	87.3
1901.....	111.1	101.0	90.4	95.4	120.1	98.3	100.2	102.2	92.3	85.9
1902.....	115.1	102.4	90.4	96.1	120.1	94.0	100.6	102.0	99.2	85.2
1903.....	144.7	104.2	91.1	106.8	120.1	112.9	108.0	109.9	101.8	90.1

Year.	Cotton and cotton goods.				Wool and woolen goods.					
	Print cloths.	Sheet- ings.	Shirt- ings.	Tick- ings.	Wool.	Blan- kets(all wool).	Broad- cloths.	Carpets.	Flan- nels.	Home blan- kets.
1890.....	117.7	117.6	112.9	113.1	132.1	108.3	113.7	105.3	116.8	109.1
1891.....	108.5	112.3	110.2	110.7	125.8	106.0	113.7	112.8	116.8	104.7
1892.....	119.3	103.8	107.4	108.4	113.2	107.1	113.7	104.5	115.9	109.1
1893.....	114.6	107.7	110.2	111.3	101.6	107.1	113.7	104.5	109.5	104.7
1894.....	96.8	95.9	99.9	102.2	79.1	101.2	91.2	98.7	94.1	96.0
1895.....	100.9	94.6	97.6	94.8	70.1	89.3	79.7	91.0	81.7	82.5
1896.....	90.9	97.4	97.9	96.0	70.6	89.3	79.7	90.2	85.4	80.8
1897.....	87.6	91.8	92.0	91.9	88.7	89.3	95.2	95.5	82.6	86.5
1898.....	72.6	86.7	83.8	84.3	108.3	107.1	95.2	100.2	97.8	90.5
1899.....	96.3	92.2	87.8	87.0	110.8	95.2	95.2	99.4	96.5	94.2
1900.....	108.6	105.9	100.4	102.2	117.7	107.1	108.0	102.7	108.7	113.7
1901.....	99.3	101.8	98.9	95.5	96.6	101.2	110.3	101.9	100.8	109.9
1902.....	108.9	101.4	98.8	99.0	100.8	101.2	110.3	102.5	105.8	109.9
1903.....	113.3	110.6	103.2	104.1	110.3	110.1	110.3	108.6	114.8	117.8

"Average for 1893-1899=100.

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1903—Concluded.

[Average price for 1890-1899=100.]

Year.	Wool and woollen goods.						Hides, leather, and boots and shoes.			Petroleum.	
	Overcoat-ings (all wool).	Shawls.	Suit-ings.	Underwear (all wool).	Women's dress goods (all wool).	Worsted yarns.	Hides.	Leather.	Boots and shoes.	Crude.	Refined.
1890.....	111.9	107.0	113.1	106.2	117.6	122.3	99.6	100.6	104.8	95.4	112.4
1891.....	111.9	107.0	113.1	110.0	123.0	123.4	101.5	100.9	103.5	73.6	102.2
1892.....	111.9	107.0	113.4	110.0	124.1	117.2	92.8	97.0	102.7	61.1	91.5
1893.....	108.6	107.0	112.7	110.0	114.7	109.5	79.9	96.9	100.9	70.3	81.0
1894.....	97.5	107.0	96.3	92.7	90.6	91.3	68.4	91.5	99.4	92.2	80.5
1895.....	90.8	107.0	89.2	92.7	82.7	74.0	109.7	108.0	98.7	149.2	106.6
1896.....	85.7	89.1	87.8	92.7	74.1	72.9	86.6	95.2	99.6	129.5	112.5
1897.....	87.8	89.5	88.7	92.7	82.2	82.5	106.3	96.1	97.2	86.5	96.6
1898.....	97.1	90.2	103.4	92.7	88.5	100.5	122.8	104.4	96.3	100.2	99.5
1899.....	100.6	89.1	106.1	100.4	102.7	106.7	131.8	109.3	96.8	142.1	118.0
1900.....	116.1	107.0	115.8	100.4	118.7	118.4	127.4	113.2	99.4	148.5	132.6
1901.....	105.3	107.0	104.9	100.4	107.9	102.2	132.0	110.8	99.2	132.9	119.3
1902.....	105.3	107.0	105.8	100.4	109.8	111.7	142.8	112.7	98.9	135.9	118.8
1903.....	110.2	107.0	109.0	100.4	114.4	118.0	124.8	112.0	100.2	174.5	142.8

This table shows for all of the 6 articles grouped under cattle and cattle products (cattle, fresh beef, beef hams, mess beef, tallow, and hides) an advance in price in 1891, but not in the same degree; in 1892, a decline in all of the articles in this group; in 1893, an increase, except for hides, for which there was a further decline; in 1894, a decline, except for beef hams, which increased; in 1895, an increase, except for beef hams and tallow; in 1896, a decline in all of the articles; in 1897, an increase, except for tallow; in 1898, an increase for all of the articles, except beef hams; in 1899, an increase for all; in 1900, a decline, except for mess beef and tallow; in 1901, an increase for cattle, tallow, and hides, and a decline for fresh beef, beef hams, and mess beef; in 1902, an increase for all, and in 1903 a decrease for all.

For the 14 years from 1890 to 1903 the lowest relative price for cattle was 88.3 in 1896, the highest 139.5 in 1902; the lowest for fresh beef 89.2 in 1890, the highest 125.9 in 1902; the lowest for beef hams 80.4 in 1890, the highest 125.6 in 1899; the lowest for mess beef 84.8 in 1892, the highest 147.1 in 1902; the lowest for tallow 76.3 in 1897, the highest 144.6 in 1902; the lowest for hides 68.4 in 1894, the highest 142.8 in 1902. The facts for the other groups may be seen by reference to the table.

General Tables I, II, III, IV, and V follow.

CATTLE: Steers, good to choice.

TABLE II.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FARM PRODUCTS—Continued.

CORN: No. 2, cash.

Price per bushel in Chicago on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.464	Apr.....	\$0.424	July...	\$0.52-\$0.524	Oct.....	\$0.464
	.47		.434		.494		.454
	.474		.434		.494		.454
	.454		.444		.52		.434
Feb.....	\$0.43-	May...	.444	Aug...	.52	Nov.....	.434
	.44		.444		.53		.43
	.45		.454		.514		.414
	.44		.454		.504		.424
Mar.....	.454	June...	.474	Sept...	.514	Dec.....	.424
	.454		.484		.514		.41
	.424		.494		.524		.42
	.414		\$0.504-		.474-		.414
	.424		.50		.46		.424
						Average	\$0.4606

COTTON: Upland, middling.

[Price per pound in New York on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan	\$0.0880	Apr....	\$0.1045	July ...	\$0.1160	Oct.....	\$0.0950
	.0885		.1050		.1220		.0960
	.0895		.1085		.1275		.0980
Feb.....	.0900	May ...	.1075	Aug ...	.1325	Nov....	.1035
	.0950		.1085		.1275		.1060
	.0960		.1130		.1275		.1115
	.0980		.1185		.1275		.1130
Mar	.1005	June...	.1170	Sept ...	.1275	Dec....	.1130
	.1045		.1150		.1275		.1195
	.1010		.1240		.1225		.1250
	.1000		.1240		.1175		.1245
	.1015		.1290		.1160		.1330
	.0985		.1300		.1300		.1370
						Average	\$0.1123

FLAXSEED: No. 1.

[Price per bushel in Chicago on the first of each month; quotations furnished by the secretary of the Chicago Board of Trade.]

Jan.....	\$1.14-\$1.21	Apr.....	\$1.06-\$1.10	July....	\$0.93-\$1.02	Oct.....	\$0.94-\$1.00
Feb.....	1.16- 1.20	May....	1.04- 1.11	Aug....	.93- .97	Nov.....	.91- .96
Mar.....	1.12- 1.16	June....	1.10- 1.13	Sept....	.94- .99	Dec.....	.91- .97
						Average	\$1.0471

HAY: Timothy, No. 1.

[Price per ton in Chicago on Tuesday of each week; quotations from the Daily Inter Ocean.]

Jan....	\$12.00-\$13.00	Apr....	\$13.50-\$14.50	July...	\$13.00-\$13.50	Oct....	\$11.00-\$11.50
	12.00-13.00		13.50-14.50		13.00-13.50		11.00-11.50
	12.00-13.00		13.50-14.50		13.00-13.50		11.00-11.50
	12.00-13.00		13.50-14.50		13.00-13.50		10.50-11.00
Feb.....	12.00-12.50	May ...	14.00-15.00	Aug...	13.00-13.50	Nov....	10.00-11.00
	12.00-12.50		13.50-14.00		13.00-13.50		10.00-11.00
	12.00-13.00		13.50-14.00		11.00-13.50		10.00-11.00
	12.00-13.00		13.50-14.00		11.00-13.50		10.50-11.50
Mar....	12.00-13.00	June...	13.50-14.00	Sept...	11.50-12.00	Dec...	11.50-12.00
	12.00-13.00		14.50-15.00		10.00-11.00		11.50-12.00
	12.50-13.50		14.50-15.00		10.00-11.00		10.50-11.50
	13.00-13.50		13.00-13.50		10.00-11.00		10.50-11.00
	13.00-13.50		13.00-13.50		10.00-11.50		10.00-11.00
						Average	\$12.4270

Jan.....	\$0.35-\$0.37	Apr.....	\$0.28-\$0.30	July....	\$0.22-\$0.23	Oct.....	\$0.25-\$0.26
Feb.....	.36-.37	May.....	.28-.24	Aug.....	.30-.21	Nov.....	.30-.32
Mar.....	.33-.35	June....	.28-.24	Sept....	.24-.25	Dec.....	.30-.32
						Average	\$0.2935

TABLE II.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FARM PRODUCTS—Continued.

OATS: Contract grades, cash.

[Price per bushel in Chicago on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.		
Jan.	\$0.32 $\frac{1}{2}$.32 $\frac{1}{2}$.34 .33 $\frac{1}{2}$.33 $\frac{1}{2}$.35 .35 $\frac{1}{2}$.33 $\frac{1}{2}$.33 $\frac{1}{2}$.34 .31 $\frac{1}{2}$.33 $\frac{1}{2}$	Apr.	\$0.32 $\frac{1}{2}$.34 .34 $\frac{1}{2}$.33 $\frac{1}{2}$.33 $\frac{1}{2}$.35 .35 $\frac{1}{2}$.36 $\frac{1}{2}$.36 $\frac{1}{2}$.36 $\frac{1}{2}$.38 $\frac{1}{2}$ \$0.40 $\frac{1}{2}$.39 - .40	July ...	\$0.41 $\frac{1}{2}$.39 $\frac{1}{2}$ \$0.37 $\frac{1}{2}$ - .38 $\frac{1}{2}$.38 $\frac{1}{2}$ - .42 .34 $\frac{1}{2}$ - .36 .35 $\frac{1}{2}$.33 $\frac{1}{2}$ - .34 35 - .35 $\frac{1}{2}$ 35 - .35 $\frac{1}{2}$ 37 .36 $\frac{1}{2}$.36 $\frac{1}{2}$	Oct.	\$0.35 $\frac{1}{2}$ \$0.36 $\frac{1}{2}$ - .37 .34 $\frac{1}{2}$.36 $\frac{1}{2}$.35 $\frac{1}{2}$.36 $\frac{1}{2}$ 33 $\frac{1}{2}$ - .33 $\frac{1}{2}$.34 $\frac{1}{2}$.34 $\frac{1}{2}$.34 $\frac{1}{2}$.34 $\frac{1}{2}$ - .34 $\frac{1}{2}$.35 $\frac{1}{2}$ - .37 .35 $\frac{1}{2}$ - .36 $\frac{1}{2}$	Nov.	
Feb.		May ...		Aug ...		Dec.			
Mar.	\$0.34 $\frac{1}{2}$.32 $\frac{1}{2}$.33 $\frac{1}{2}$.33 $\frac{1}{2}$.34 .31 $\frac{1}{2}$.33 $\frac{1}{2}$	June ..		Sept ...	35 -	Average	\$0.3541		

RYE: No. 2, cash.

[Price per bushel in Chicago on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Jan.....	\$0.48 .48 .49 $\frac{1}{2}$ \$0.49 $\frac{1}{2}$ - .50 .49 - .50 .49 - .50 $\frac{1}{2}$.48 $\frac{1}{2}$ - .50 .49 - .51 $\frac{1}{2}$ \$0.49 $\frac{1}{2}$ - .51 .50 $\frac{1}{2}$ - .51 .49 - .50 $\frac{1}{2}$.49 - .51 $\frac{1}{2}$	Apr....	\$0.49 $\frac{1}{2}$ - \$0.51 .49 $\frac{1}{2}$ - .51 .50 - .50 $\frac{1}{2}$.50 .50 49 $\frac{1}{2}$ - .50 .50 49 - 49 $\frac{1}{2}$ 49 - 49 $\frac{1}{2}$.51 $\frac{1}{2}$.51 .52 $\frac{1}{2}$.51	July ...	\$0.50 $\frac{1}{2}$ - \$0.51 .50 .50 .51 .51 $\frac{1}{2}$.51 $\frac{1}{2}$.51 $\frac{1}{2}$ - .52 .53 $\frac{1}{2}$.54 $\frac{1}{2}$ - .57 .56 $\frac{1}{2}$ - .57 .54 $\frac{1}{2}$.60	Oct	\$0.53 .54 $\frac{1}{2}$.56 $\frac{1}{2}$.55 .55 $\frac{1}{2}$.52 $\frac{1}{2}$.52 $\frac{1}{2}$ \$0.51 - .52 $\frac{1}{2}$.50 $\frac{1}{2}$ - .51 .51 $\frac{1}{2}$.52	Nov ...	
Feb.....		May ...		Aug ...		Dec.....	\$0.51 - .52 $\frac{1}{2}$.50 $\frac{1}{2}$ - .51 .51 $\frac{1}{2}$.52		
Mar.....		June ..	49 - 49 $\frac{1}{2}$ 49 - 49 $\frac{1}{2}$.51 $\frac{1}{2}$.51 .52 $\frac{1}{2}$.51	Sept ...		Average	\$0.5156		

SHEEP: Native.

[Price per hundred pounds in Chicago on Tuesday of each week; quotations from the Daily Inter Ocean.]

Jan.....	\$2.00-4.65 3.00-5.00 3.50-4.40 3.00-4.40 2.50-5.25 3.25-4.50 4.50-5.10 4.25-5.00 3.25-5.75 4.50-5.75 3.50-6.25 4.50-7.00 3.50-7.00	Apr....	\$3.00-6.75 4.00-6.25 2.75-5.50 3.25-5.75 4.50-5.60 4.75-5.25 3.00-5.50 2.75-5.75 3.00-5.00 3.50-4.50 3.00-4.75 4.00-4.50 3.50-4.25	July...	\$2.25-4.00 2.50-4.25 2.00-4.50 2.50-4.00 2.25-3.90 3.00-3.50 3.00-3.50 3.00-3.75 2.25-4.00 2.00-3.50 1.75-3.75 2.25-4.00 2.00-3.65	Oct....	\$2.00-3.75 2.00-3.75 1.75-3.50 2.00-3.75 1.25-3.60 2.00-3.50 1.50-3.60 2.00-4.00 2.00-3.85 1.50-4.00 2.25-4.00 2.25-4.25 2.25-4.25	Nov....	
Feb.....		May...		Aug...		Dec....			
Mar.....		June..		Sept...		Average	\$3.7101		

FOOD, ETC.—Continued.

[Price per pound in New York on the first of each month; quotations from the Merchants' Review.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.07	Apr.....	\$0.06	July....	\$0.06	Oct.....	\$0.06½
Feb.....	.07	May.....	.06	Aug.....	.06½	Nov.....	.06½
Mar.....	.07	June....	.06	Sept....	.06½	Dec.....	.06½
						Average	\$0.0646

[Price per loaf in Washington, D. C., on the first of each month.]

Jan.....	\$0.04	Apr.....	\$0.04	July ...	\$0.04	Oct.....	\$0.04
Feb.....	.04	May.....	.04	Aug.....	.04	Nov.....	.04
Mar.....	.04	June....	.04	Sept....	.04	Dec.....	.04
						Average	\$0.04

[Price per loaf in New York on the first of each month. Standard weight and standard prices charged by the Bakers' Association, which includes leading bread manufacturers in New York, Brooklyn, and one or two in New Jersey who deliver their bread in Manhattan. Quotations furnished by Emil Braun.]

Jan.....	\$0.04	Apr.....	\$0.04	July.....	\$0.04	Oct.....	\$0.04
Feb.....	.04	May.....	.04	Aug.....	.04	Nov.....	.04
Mar.....	.04	June.....	.04	Sept.....	.04	Dec.....	.04
						Average	\$0.04

[Price per loaf in New York on the first of each month. Standard weight and standard prices charged by the Bakers' Association, which includes leading bread manufacturers in New York, Brooklyn, and one or two in New Jersey who deliver their bread in Manhattan. Quotations furnished by Emil Braun.]

Jan.....	\$0.04	Apr.....	\$0.04	July.....	\$0.04	Oct.....	\$0.04
Feb.....	.04	May.....	.04	Aug.....	.04	Nov.....	.04
Mar.....	.04	June.....	.04	Sept.....	.04	Dec.....	.04
						Average	\$0.04

[Price per pound in Elgin, Ill., on Monday of each week; quotations furnished by D. W. Willson, editor of the Elgin Dairy Report.]

Jan	\$0.29	Apr....	\$0.28½	July ...	\$0.20	Oct.....	\$0.20½
	.28		.27½		.20		.20½
	.27		.25		.20		.21
	.25		.22½		.18½		.21½
Feb.....	.26	May ...	.20	Aug ...	.18½	Nov	.22
	.25		.21		.19		.22
	.26		.21		.19		.22
	.27		.21		.19½		.24
					.19½		.25
Mar	.27½	June...	.21½	Sept ...	.19½	Dec	.25
	.27½		.22		.20		.25
	.28½		.21		.21		.25
	.28½		.21		.21½		.24
	.28½		.20				
						Average	\$0.2302

Jan.....	\$0.05	\$0.05	Apr.....	\$0.05	\$0.05	July.....	\$0.05	\$0.05	Oct.....	\$0.05	\$0.05
Feb.....	.05	.05	May.....	.05	.05	Aug.....	.05	.05	Nov.....	.05	.05
Mar.....	.05	.05	June.....	.05	.05	Sept.....	.05	.05	Dec.....	.05	.05
										Average	\$0.0500

TABLE II.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FOOD, ETC.—Continued.

EGGS: New-laid, fancy, near-by.

[Price per dozen in New York on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.28-\$0.33	Apr.....	\$0.15-\$0.164	July...	\$0.184-\$0.19	Oct.....	\$0.25-\$0.28
	.30-.34		.15-.16		.184-.20		.25-.30
	.27-.30		.16-.17		.184-.20		.25-.30
Feb.....	.25-.28		.16-.174		.20-.22		.27-.33
	.25-.27	May...	.16-.174	Aug...	.20-.23	Nov....	.27-.35
	.20-.28		.17-.184		.20-.26		.30-.38
	.20-.22		.17-.19		.20-.26		.30-.40
	.17-.184		.17-.19		.21-.26		.34-.45
Mar.....	.174-.194	June...	.16-.18	Sept...	.23-.26	Dec....	.31-.40
	.194-.21		.184-.194		.24-.27		.31-.40
	.18-.20		.184-.194		.24-.27		.34-.42
	.14-.15		.184-.194		.24-.27		.36-.45
	.144-.164		.184-.194		.25-.28		.36-.45
Average							\$0.2418

FISH: Cod, dry, bank, large.

[Price per quintal in Boston on the first of each month; quotations from the Boston Herald.]

Jan.....	\$5.50-\$5.75	Apr.....	\$5.50-\$5.75	July...	\$5.75	Oct.....	\$5.75-\$6.00
Feb.....	5.50-5.75	May...	5.50-5.75	Aug...	5.75	Nov....	5.25-5.50
Mar.....	5.50-5.75	June...	5.75	Sept...	\$6.00-6.25	Dec....	6.50-6.75
Average							\$5.8646

FISH: Herring, shore, round, large.

[Price per barrel in Boston on the first of each month; quotations from the Boston Herald.]

Jan.....	\$5.75-\$6.00	Apr.....	\$5.75-\$6.00	July...	\$5.75-\$6.00	Oct.....	\$5.00-\$5.50
Feb.....	5.75-6.00	May...	5.75-6.00	Aug...	5.75-6.00	Nov....	5.25-5.50
Mar.....	5.75-6.00	June...	5.75-6.00	Sept...	5.75-6.00	Dec....	5.00-5.50
Average							\$5.7292

FISH: Mackerel, salt, large No. 3s.

[Price per barrel in Boston on the first of each month; quotations from the Boston Herald.]

Jan.....	\$18.50-\$19.50	Apr.....	\$18.00-\$20.00	July...	\$13.75-\$15.00	Oct.....	\$14.50
Feb.....	\$19.50-20.50	May...	18.00-20.00	Aug...	14.00-15.00	Nov....	15.50
Mar.....	\$22.00-23.00	June...	18.00-20.00	Sept...	\$16.00-17.00	Dec....	15.50
Average							\$17.4479

FISH: Salmon, canned, Columbia River, 1-pound talls.

[Price per dozen cans in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$1.55-\$1.60	Apr.....	\$1.60	July...	\$1.50-\$1.60	Oct.....	\$1.70-\$1.75
Feb.....	1.60	May...	1.60	Aug...	1.55-1.60	Nov....	1.70-1.75
Mar.....	1.60	June...	1.60	Sept...	1.55-1.60	Dec....	1.70-1.75
Average							\$1.6208

a Large 2s.

b Medium 2s.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FOOD, ETC.—Continued.

FLOUR: Buckwheat.

[Price per hundred pounds in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$2.30	Apr.....	(a)	July...	(a)	Oct.....	\$2.30-\$2.40
Feb.....	\$2.15-2.25	May.....	(a)	Aug...	(a)	Nov.....	2.35-2.40
Mar.....	2.00	June....	(a)	Sept....	\$2.75	Dec.....	2.25-2.30
						Average	\$2.3214

FLOUR: Rye.

[Price per barrel in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$3.00-\$3.60	Apr.....	\$2.80-\$3.25	July...	\$2.90-\$3.20	Oct.....	\$3.25-\$3.40
Feb.....	2.90-3.55	May.....	2.75-3.20	Aug...	2.90-3.20	Nov.....	3.25-3.40
Mar.....	2.90-3.25	June....	2.75-3.20	Sept....	3.05-3.30	Dec.....	3.15-3.40
						Average	\$3.1479

FLOUR: Wheat, spring patents.

[Price per barrel in New York on Tuesday of each week; quotations furnished by the statistician of the New York Produce Exchange.]

Jan.....	\$3.55-\$4.15	Apr.....	\$3.75-\$4.15	July...	\$4.25-\$4.65	Oct.....	\$4.30-\$4.85
	3.55-4.20		3.75-4.25		4.25-4.70		4.40-4.80
	3.75-4.30		3.75-4.25		4.15-4.65		4.40-4.85
	3.85-4.35		3.75-4.25		4.25-4.65		4.40-4.85
Feb.....	3.85-4.20	May...	3.80-4.35	Aug...	4.30-4.80	Nov.....	4.40-4.80
	3.85-4.25		3.80-4.35		4.35-4.85		4.25-4.80
	3.85-4.25		4.00-4.45		4.50-5.00		4.15-4.75
	3.85-4.25		4.00-4.45		4.50-5.00		4.15-4.75
Mar....	3.85-4.25	June....	4.05-4.50	Sept....	4.50-5.00	Dec.....	4.15-4.75
	3.85-4.20		4.10-4.55		4.45-4.95		4.20-4.80
	3.85-4.20		4.10-4.55		4.45-4.95		4.20-4.80
	3.85-4.15		4.25-4.60		4.40-4.90		4.20-4.80
	3.85-4.15		4.25-4.60		4.35-4.80		4.20-4.80
						Average	\$4.3308

FLOUR: Wheat, winter straights.

[Price per barrel in New York on Tuesday of each week; quotations furnished by the statistician of the New York Produce Exchange.]

Jan.....	\$3.10-\$3.50	Apr.....	\$3.20-\$3.55	July...	\$3.45-\$3.75	Oct....	\$3.50-\$3.95
	3.10-3.50		3.20-3.60		3.45-3.85		3.55-3.95
	3.25-3.60		3.20-3.60		3.45-3.80		3.60-4.00
	3.30-3.65		3.20-3.60		3.45-3.80		3.60-4.00
Feb.....	3.25-3.60	May...	3.20-3.60	Aug...	3.45-3.85	Nov....	3.60-4.00
	3.25-3.60		3.20-3.60		3.45-3.85		3.60-4.00
	3.25-3.60		3.30-3.60		3.55-3.95		3.60-4.00
	3.25-3.60		3.35-3.65		3.60-3.80		3.60-4.00
Mar....	3.25-3.60	June....	3.40-3.70	Sept....	3.50-3.85	Dec....	3.60-4.00
	3.25-3.60		3.45-3.75		3.50-3.85		3.65-4.05
	3.25-3.60		3.45-3.75		3.50-3.90		3.65-4.05
	3.25-3.60		3.45-3.75		3.50-3.90		3.65-4.10
	3.20-3.60		3.45-3.75		3.50-3.90		3.70-4.15
						Average	\$3.5923

* No quotation for month.

TABLE L.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FOOD, ETC.—Continued.

FRUIT: Apples, evaporated, choice.

[Price per pound in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.054-\$0.054	Apr.....	\$0.054-\$0.05	July...	\$0.06	Oct.....	\$0.06-\$0.064
Feb.....	.054-.054	May....	.054-.05	Aug....	\$0.054-.064	Nov.....	.054-.064
Mar.....	.054-.054	June....	.05	Sept....	.05-.064	Dec.....	.054-.064
						Average	\$0.0611

FRUIT: Apples, sun-dried, Southern, sliced.

[Price per pound in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$0.04-\$0.05	Apr.....	\$0.04-\$0.054	July...	\$0.034-\$0.044	Oct.....	\$0.034-\$0.044
Feb.....	.04-.054	May....	.034-.044	Aug....	.034-.044	Nov.....	.034-.044
Mar.....	.044-.054	June....	.034-.044	Sept....	.034-.044	Dec.....	.034-.044
						Average	\$0.0432

FRUIT: Currants, amallas, in barrels.

[Price per pound in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$0.044	Apr.....	\$0.044-\$0.044	July...	\$0.054-\$0.054	Oct.....	\$0.044-\$0.044
Feb.....	.044-.044	May....	.044-.044	Aug....	.05-.054	Nov.....	.044-.05
Mar.....	\$0.044-.044	June....	.044-.044	Sept....	.044-.05	Dec.....	.05-.054
						Average	\$0.0476

FRUIT: Prunes, California, Santa Clara, 60s to 70s, in 25-pound boxes.

[Price per pound in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$0.054	Apr.....	\$0.044	July...	\$0.044-\$0.044	Oct.....	\$0.044-\$0.044
Feb.....	\$0.05-.054	May....	\$0.044-.044	Aug....	.044-.044	Nov.....	.044-.044
Mar.....	.044-.05	June....	.044-.044	Sept....	.044-.044	Dec.....	.054-.054
						Average	\$0.0481

FRUIT: Raisins, California, London layer.

[Price per box in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$1.60-\$1.70	Apr.....	\$1.40-\$1.50	July...	\$1.25-\$1.45	Oct.....	\$1.50
Feb.....	1.60	May....	1.25-1.45	Aug....	1.25-1.45	Nov.....	1.60
Mar.....	1.60-1.60	June....	1.25-1.45	Sept....	1.25-1.45	Dec.....	\$1.40-1.60
						Average	\$1.4458

GLUCOSE: 41° and 42° mixing.

[Price per hundred pounds in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$1.75	Apr.....	\$1.90-\$1.95	July...	\$1.95	Oct.....	\$1.95
Feb.....	1.75	May....	1.80	Aug....	1.95	Nov.....	1.70
Mar.....	1.80	June....	1.80	Sept....	1.95	Dec.....	1.70
						Average	\$1.8396

TABLE 1.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

FOOD, ETC.—Continued.

LARD: Prime contract.

[Price per pound in New York on Tuesday of each week; quotations furnished by the statistician of the New York Produce Exchange.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan	\$0.1030	Apr....	\$0.1022½	July ...	\$0.0825	Oct	\$0.0792½
	.1025		.1025		.0765		.0737½
	.1040		.1025		.0800		.0700
Feb.....	.1040		.0975		.0775		.0710
	.0990	May ...	.0930	Aug ...	.0785	Nov	.0725
	.1000		.0925		.0815		.0730
	.1020		.0930		.0800		.0745
	.1010		.0915		.0812½		.0700
Mar	.1017½	June...	.0920	Sept ...	.0865	Dec	.0685
	.1085		.0907½		.0900		.0690
	.1017½		.0915		.0900		.0690
	.1040		.0890		.0890		.0700
	.1040		.0840		.0837½		.0715
						Average	\$0.0677

MEAL: Corn, fine white.

[Price per bag of 100 pounds in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$1.40-\$1.45	Apr.....	\$1.15-\$1.20	July....	\$1.35	Oct.....	\$1.20-\$1.25
Feb.....	1.45	May....	1.12- 1.15	Aug....	1.35	Nov.....	1.30
Mar.....	1.40- 1.45	June....	1.25- 1.30	Sept...	1.30	Dec.....	1.15
						Average	\$1.2967

MEAL: Corn, fine yellow.

[Price per bag of 100 pounds in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$1.40	Apr.....	\$1.15-\$1.20	July.....	\$1.30	Oct.....	\$1.25-\$1.30
Feb.....	\$1.40- 1.45	May.....	1.08- 1.10	Aug.....	1.25	Nov.....	1.25
Mar.....	1.85- 1.40	June.....	1.25- 1.30	Sept.....	\$1.30- 1.35	Dec.....	1.20
						Average	\$1.2783

MEAT: Bacon, short clear sides, smoked.

[Price per pound in Chicago on Tuesday of each week. From January to October 20, the prices are for packed, and from October 27 to December, for loose; quotations from the Daily Trade Bulletin.]

[illegible]

Jan.....	\$0.05½ - \$0.07½	Apr....	\$0.08 - \$0.11	July....	\$0.06 - \$0.09	Oct....	\$0.05 - \$0.07½
	.06 - .08		.08 - .11		.08 - .08½		.05½ - .07½
	.06 - .08		.07½ - .10½		.08 - .09		.06 - .07
Feb.....	.05 - .08	May....	.07 - .10		.08½ - .09	Nov....	.06 - .07
	.06½ - .09		.08 - .11	Aug....	.05½ - .08		.06 - .07
	.06½ - .08½		.08 - .10½		.06 - .08		.06 - .07
Mar....	.07½ - .09	June....	.07 - .10		.06½ - .08		.06 - .07
	.07½ - .09½		.07 - .10	Sept....	.06½ - .07½	Dec....	.06 - .07
	.08 - .10		.07½ - .11		.06½ - .07½		.06½ - .07
	.08 - .10		.07 - .10		.06 - .08		.06½ - .07
	.08 - .10½		.06½ - .09		.06½ - .07½		.06 - .07½
						Average	\$0.0744

BULLETIN OF THE BUREAU

I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued

CLOTHS AND CLOTHING—Continued

COTTON THREAD: 6-cord, 200-yard spools, J. & P. Cona.

[Price per spool, freight paid, on the first of each month.]

Price.	Month.	Price.	Month.	Price.	Month.	Price.
\$0.03724	Apr....	\$0.03724	July...	\$0.03724	Oct....	\$0.03
.03724	May...	.03724	Aug...	.03724	Nov....	.03
.03724	June...	.03724	Sept...	.03724	Dec....	.03
					Average	\$0.03

COTTON YARNS: Carded, white, mule-spin, Northern, cones, 10/1.

[Price per pound on the first of each month.]

Jan....	\$0.16½	Apr....	\$0.17	July...	\$0.20½	Oct....	\$0.
Feb....	.16½	May...	.18½	Aug...	.21	Nov....	
Mar....	.17½	June...	.19½	Sept...	.20	Dec....	
						Average	\$0.

COTTON YARNS: Carded, white, mule-spin, Northern, cones, 22/1.

[Price per pound on the first of each month.]

Jan....	\$0.19½	Apr....	\$0.20½	July...	\$0.22½	Oct....	\$0
Feb....	.19½	May...	.21½	Aug...	.22½	Nov....	
Mar....	.20½	June...	.22½	Sept...	.22½	Dec....	
						Average	\$0

DENIMS: Amoskeag.

[Price per yard on the first of each month.]

Jan....	\$0.10½	Apr....	\$0.11	July...	\$0.11½	Oct....	
Feb....	.10½	May...	.11	Aug...	.11½	Nov....	
Mar....	.10½	June...	.11½	Sept...	.11½	Dec....	
						Average	

DRILLINGS: Brown, Pepperell.

[Price per yard on the first of each month.]

Jan....	\$0.06½	Apr....	\$0.06½	July...	\$0.06½	Oct....	
Feb....	.06½	May...	.06	Aug...	.06½	Nov....	
Mar....	.06½	June...	.06½	Sept...	.06½	Dec....	
						Average	

DRILLINGS: 30-inch, Stark A.

[Average monthly price per yard.]

Jan....	\$0.0560	Apr....	\$0.0551	July...	\$0.0572	Oct....	
Feb....	.0550	May...	.0544	Aug...	.0508	Nov....	
Mar....	.0543	June...	.0564	Sept...	.0523	Dec....	
						Average	

TABLE L.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

CLOTHS AND CLOTHING—Continued.

FLANNELS: White, 4-4, Ballard Vale No. 8.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.41	Apr.....	\$0.42	July....	\$0.44	Oct.....	\$0.44
Feb.....	.41	May.....	.42	Aug....	.44	Nov.....	.44
Mar.....	.42	June....	.42	Sept....	.44	Dec.....	.44
						Average	\$0.4306

GINGHAMS: Amoskeag.

[Price per yard on the first of each month.]

Jan.....	\$0.054	Apr.....	\$0.054	July.....	\$0.054	Oct.....	\$0.054
Feb.....	.054	May.....	.054	Aug.....	.054	Nov.....	.054
Mar.....	.054	June.....	.054	Sept.....	.054	Dec.....	.054
						Average	\$0.0550

GINGHAMS: Lancaster.

[Price per yard on the first of each month.]

Jan.....	\$0.054	Apr.....	\$0.054	July.....	\$0.054	Oct.....	\$0.054
Feb.....	.054	May.....	.054	Aug.....	.054	Nov.....	.054
Mar.....	.054	June.....	.054	Sept.....	.054	Dec.....	.054
						Average	\$0.0575

HORSE BLANKETS: 6 pounds each, all wool.

[Price per pound maintained throughout the year.]

Year.	Price.
1908.....	\$0.67½

NOSEIERY: Men's cotton half hose, seamless, fast black, 20 to 22 ounce, 160 needles.

[Price per dozen pairs in September. Represents bulk of sales.]

Month.	Price.
Sept	\$0.7840

HOSIERY: Men's cotton half hose, seamless, standard quality, 84 needles.

[Price per dozen pairs on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.67½	Apr.....	\$0.70	July....	\$0.72½	Oct.....	\$0.72½
Feb.....	.67½	May.....	.71	Aug.....	.72½	Nov.....	.72½
Mar.....	.67½	June....	.70	Sept....	.72½	Dec.....	.72½
						Average	\$0.7000

Jan.....	\$0.65-\$0.67	Apr.....	\$0.67½-\$0.72½	July.....	\$0.67½-\$0.72½	Oct.....	\$0.67½-\$0.72½	
Feb.....	.65-.67	May.....	.67½-.72½	Aug.....	.67½-.72½	Nov.....	.67½-.72½	
Mar.....	.65-.67	June.....	.67½-.72½	Sept.....	.67½-.72½	Dec.....	.67½-.72½	
							Average	\$0.6800

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

CLOTHS AND CLOTHING—Continued.

LINEN SHOE THREAD: 10s, Barbour.

[Price per pound on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.846	Apr.....	\$0.846	July...	\$0.846	Oct.....	\$0.846
Feb.....	.846	May.....	.846	Aug....	.846	Nov.....	.846
Mar.....	.846	June....	.846	Sept...	.846	Dec.....	.846
						Average	\$0.846

LINEN THREAD: 3-cord, 200-yard spools, Barbour.

[Price per dozen spools on the first of each month.]

Jan.....	\$0.837	Apr.....	\$0.837	July...	\$0.837	Oct.....	\$0.837
Feb.....	.837	May.....	.837	Aug....	.837	Nov.....	.837
Mar.....	.837	June....	.837	Sept...	.837	Dec.....	.837
						Average	\$0.837

OVERCOATINGS: Beaver, Moscow, all wool, black.

[Price per yard maintained, generally, throughout the year. Represents bulk of sales.]

Year.	Price.
1903.....	\$2.4413

OVERCOATINGS: Chinchilla, B-rough, all wool.

[Price per yard maintained, generally, throughout the year. Represents bulk of sales.]

1903.....	\$2.2068
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OVERCOATINGS: Chinchilla, cotton warp, C. C. grade.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.44	Apr.....	\$0.451	July...	\$0.451	Oct.....	\$0.461
Feb.....	.451	May.....	.451	Aug....	.451	Nov.....	.451
Mar.....	.451	June....	.451	Sept...	.451	Dec.....	.44
						Average	\$0.4538

OVERCOATINGS: Covert cloth, light weight, staple goods.

[Price per yard maintained throughout the year.]

Year.	Price.
1903.....	\$2.1899

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

CLOTHS AND CLOTHING—Continued.

OVERCOATINGS: Kersey, standard, 27 to 28 ounce.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$1.57½	Apr....	\$1.57½	July...	\$1.57½	Oct.....	\$1.57½
Feb.....	1.57½	May....	1.57½	Aug...	1.57½	Nov.....	1.57½
Mar.....	1.57½	June...	1.57½	Sept...	1.57½	Dec.....	1.57½
						Average	\$1.5750

PRINT CLOTHS: 28-inch, 64 by 64.

[Average weekly price per yard.]

Jan.....	\$0.080000	Apr....	\$0.082500	July...	\$0.082500	Oct....	\$0.083750
	.080000		.080625		.082500		.082500
	.080813		.081250		.081875		.081250
	.081190		.081250		.081875		.081250
	.081875						.081250
Feb.....	.082500	May....	.081250	Aug...	.082500	Nov....	.081875
	.082500		.080000		.081875		.082500
	.082500		.080000		.081875		.082500
	.082500		.081250		.082500		.082500
			.081875		.082500		
Mar.....	.082500	June...	.081875	Sept...	.082500	Dec....	.082500
	.082500		.082500		.083750		.083750
	.082500		.082500		.083750		.084966
	.082500		.082500		.083750		.085000
						Average	\$0.082156

SHAWLS: Standard, all wool, 72 by 144 inch, 42-ounce, made of high-grade wool.

[Price each on the first of each month.]

Jan.....	\$4.90	Apr....	\$4.90	July...	\$4.90	Oct....	\$4.90
Feb.....	4.90	May....	4.90	Aug...	4.90	Nov....	4.90
Mar.....	4.90	June...	4.90	Sept...	4.90	Dec....	4.90
						Average	\$4.90

SHEETINGS: Bleached, 10-4, Atlantic.

[Price per yard on the first of each month.]

Jan.....	\$0.1995	Apr....	\$0.1973	July...	\$0.2271	Oct....	\$0.2325
Feb.....	.1962	May....	.2112	Aug...	.2247	Nov....	.2114
Mar.....	.1981	June...	.2258	Sept...	(a)	Dec....	(a)
						Average	\$0.2124

SHEETINGS: Bleached, 10-4, Pepperell.

[Price per yard on the first of each month.]

Jan.....	\$0.22	Apr....	\$0.22	July...	\$0.23	Oct....	\$0.23
Feb.....	.22	May....	.22	Aug...	.23	Nov....	.24
Mar.....	.22	June...	.23	Sept...	.23	Dec....	.24
						Average	\$0.2275

(a) No sales during month.

TABLE L.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

CLOTHS AND CLOTHING—Continued.

SHEETINGS: Bleached, 10-4, Wamsutta S. T.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.2925	Apr.....	\$0.2925	July...	\$0.3150	Oct.....	\$0.3150
Feb.....	.2925	May...	.2925	Aug...	.3150	Nov.....	.3150
Mar.....	.2925	June..	.2925	Sept...	.3150	Dec.....	.3150
						Average	\$0.3088

SHEETINGS: Brown, 4-4, Atlantic A.

[Price per yard on the first of each month.]

Jan.....	\$0.0595	Apr.....	\$0.0614	July..	\$0.0642	Oct.....	\$0.0661
Feb.....	.0595	May...	.0620	Aug...	.0655	Nov.....	.0660
Mar.....	.0611	June..	.0640	Sept...	.0665	Dec.....	.0673
						Average	\$0.0636

SHEETINGS: Brown, 4-4, Indian Head.

[Price per yard on the first of each month.]

Jan.....	\$0.064	Apr.....	\$0.064	July...	\$0.07	Oct.....	\$0.07
Feb.....	.064	May...	.064	Aug...	.07	Nov.....	.07½
Mar.....	.064	June..	.064	Sept...	.07	Dec.....	.07½
						Average	\$0.0681

SHEETINGS: Brown, 4-4, Massachusetts Mills, Flying Horse brand, 3¼ yards to the pound.

[Price per yard on the first of each month.]

Jan.....	\$0.054	Apr.....	\$0.06	July...	\$0.06½	Oct.....	\$0.064
Feb.....	.054	May...	.06½	Aug...	.06½	Nov.....	.064
Mar.....	.06	June..	.06½	Sept...	.06½	Dec.....	.064
						Average	\$0.0623

SHEETINGS: Brown, 4-4, Pepperell B.

[Price per yard on the first of each month.]

Jan.....	\$0.054	Apr.....	\$0.054	July...	\$0.06	Oct.....	\$0.06½
Feb.....	.054	May...	.054	Aug...	.06½	Nov.....	.06½
Mar.....	.054	June..	.06	Sept...	.06½	Dec.....	.06½
						Average	\$0.0599

SHEETINGS: Bleached, 4-4, Fruit of the Loom.

[Price per yard on the first of each month.]

Jan.....	\$0.071	Apr.....	\$0.071	July...	\$0.071	Oct.....	\$0.071
Feb.....	.071	May...	.071	Aug...	.071	Nov.....	.071
Mar.....	.071	June..	.071	Sept...	.071	Dec.....	.071
						Average	\$0.0757

Jan.....	\$4.1710-\$4.2438	Apr.....	\$4.1225-\$4.2195	July.....	\$4.1710	Oct.....	\$4.1225-\$4.2195
Feb.....	4.2438- 4.2680	May.....	4.0740- 4.1710	Aug.....	\$4.1225- 4.1710	Nov.....	3.9285- 4.0740
Mar.....	4.2195- 4.3165	June.....	4.1710- 4.2438	Sept.....	4.1225- 4.1953	Dec.....	3.6375- 3.8815
						Average	\$4.1346

Jan.....	\$1.29	Apr.....	\$1.20	July.....	\$1.17	Oct.....	\$1.15
Feb.....	1.29	May.....	1.17	Aug.....	1.17	Nov.....	1.15
Mar.....	1.20	June.....	1.17	Sept.....	1.17	Dec.....	1.15
						Average	\$1.1771

TABLE II.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.**FUEL AND LIGHTING—Continued.**

COAL: Anthracite, stove.

[Average monthly selling price per ton, at tide water, New York Harbor.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$4.9520	Apr.....	\$4.4500	July....	\$4.7501	Oct.....	\$4.9500
Feb.....	4.9520	May.....	4.5500	Aug.....	4.5307	Nov.....	4.9510
Mar.....	4.9520	June....	4.6415	Sept....	4.9500	Dec.....	4.9502
						Average	\$4.8245

COAL: Bituminous, Georges Creek.

[Price per ton at the mine on the first of each month.]

Jan.....	\$4.00	Apr.....	\$2.25	July....	\$2.00	Oct.....	\$2.00
Feb.....	4.50	May.....	2.00	Aug....	2.00	Nov.....	1.75
Mar.....	2.50	June....	2.00	Sept....	2.00	Dec.....	1.75
						Average	\$2.3966

COAL: Bituminous, Georges Creek.

[Price per ton, f. o. b. New York Harbor, on the first of each month.]

Jan.....	\$7.95	Apr.....	\$4.20	July.....	\$3.85	Oct.....	\$3.85
Feb.....	6.60	May.....	3.85	Aug.....	3.85	Nov.....	3.65
Mar.....	4.20	June.....	3.85	Sept.....	3.85	Dec.....	3.65
						Average	\$4.4375

COAL: Bituminous, Pittsburg (Youghiogheny).

[Price per bushel on Tuesday of each week, Cincinnati, afloat; quotations furnished by the superintendent of the Cincinnati Chamber of Commerce.]

Jan.....	\$0.10	Apr....	\$0.09	July...	\$0.09	Oct.....	\$0.09
	.10		.09		.09		.09
	.10		.09		.09		.09
	.10		.09		.09		.09
Feb.....	.10	May...	.09	Aug...	.09	Nov....	.09
	.10		.09		.09		.09
	.10		.09		.09		.09
	.10		.09		.09		.09
Mar.....	.10	June..	.09	Sept...	.09	Dec....	.09
	.10		.09		.09		.09
	.10		.09		.09		.09
	.10		.09		.09		.09
	.10		.09		.09		.09
						Average	\$0.0925

(OKE: Connellsville, furnace.

[Contract price per ton, f. o. b. at the ovens, on the first of each month; quotations from the Iron Age and the Bulletin of the American Iron and Steel Association.]

Jan.....	\$4.00	Apr.....	\$3.75-\$4.00	July.....	\$2.75	Oct.....	\$2.00-\$2.25
Feb.....	4.00	May.....	3.50	Aug.....	2.25	Nov.....	1.75- 2.00
Mar.....	4.00	June.....	2.75- 3.00	Sept.....	\$2.00- 2.25	Dec.....	1.50- 1.66
						Average	\$2.9135

[Price each in New York on the first of each month.]

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

METALS AND IMPLEMENTS—Continued.

COPPER: Ingot, lake.

[Price per pound in New York on the first of each month; quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan	\$0.1200-\$0.1237	Apr.....	\$0.1500-\$0.1525	July....	\$0.1400-\$0.1450	Oct.....	\$0.1325-\$0.1337
Feb	.1255- .1280	May	.1500	Aug	.1300- .1325	Nov	.1375 - .1400
Mar	.1350- .1375	June ..	1475- .1500	Sept....	.1375- .1387	Dec	.1212- .1237
						Average	\$0.1368

(COPPER: Sheet, hot-rolled (base sizes).

[Price per pound in New York on the first of each month.]

Jan.....	\$0.18	Apr.....	\$0.20	July.....	\$0.20	Oct.....	\$0.18
Feb.....	.18	May.....	.20	Aug.....	.20	Nov.....	.18
Mar.....	.20	June.....	.20	Sept.....	.20	Dec.....	.18
						Average	\$0.1917

(COPPER WIRE: Bare, No. 8, B. and S. gauge and heavier (base sizes).

[Price per pound, f. o. b. New York, on the first of each month.]

Jan.....	\$0.134	Apr.....	\$0.164	July.....	\$0.144	Oct.....	\$0.144
Feb.....	.144	May.....	.164	Aug.....	.144	Nov.....	.144
Mar.....	.154	June.....	.154	Sept....	.144	Dec.....	.144
						Average	\$0.1497

DOORKNOBS: Steel, bronze plated.

[Price per pair in New York on the first of each month.]

Jan.....	\$0.225	Apr.....	\$0.225	July.....	\$0.225	Oct.....	\$0.225	
Feb.....	.225	May.....	.225	Aug.....	.225	Nov.....	.225	
Mar.....	.225	June.....	.225	Sept.....	.225	Dec.....	.225	
							Average	\$0.2250

FILES: 8-inch mill bastard, Nicholson.

[Price per dozen on the first of each month.]

Jan.....	\$1.05	Apr.....	\$1.05	July.....	\$1.05	Oct.....	\$1.05
Feb.....	1.05	May.....	1.05	Aug.....	1.05	Nov.....	1.05
Mar.....	1.05	June.....	1.05	Sept.....	1.05	Dec.....	1.05
						Average	\$1.05

HAMMERS: Maydole No. 14.

[Price each in New York on the first of each month.]

Jan.....	\$0.466	Apr.....	\$0.466	July.....	\$0.466	Oct.....	\$0.466	
Feb.....	.466	May.....	.466	Aug.....	.466	Nov.....	.466	
Mar.....	.466	June.....	.466	Sept.....	.466	Dec.....	.466	
							Average	\$0.4666

TABLE II.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

METALS AND IMPLEMENTS—Continued.

LEAD: Pig, desilverized.

[Price per pound in New York on the first of each month; quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.0410-\$0.0412	Apr.....	\$0.0467	July....	\$0.0410-\$0.0412	Oct.....	\$0.0440-\$0.0450
Feb.....	.0412	May.....	.0437 $\frac{1}{2}$	Aug....	.0420	Nov.....	.0440- .0450
Mar.....	.0412	June....	.0457 $\frac{1}{2}$	Sept....	.0410- .0412	Dec.....	.0425
						Average	\$0.0428

LEAD PIPE.

[Price per hundred pounds, f. o. b. New York, on the first of each month.]

Jan.....	\$5.20	Apr.....	\$5.70	July.....	\$5.05	Oct.....	\$5.10
Feb.....	5.20	May.....	5.40	Aug.....	5.05	Nov.....	5.10
Mar.....	5.40	June.....	5.15	Sept.....	4.90	Dec.....	5.10
						Average	\$5.1958

LOCKS: Common mortise.

[Price each in New York on the first of each month.]

Jan.....	\$0.09	Apr.....	\$0.09	July.....	\$0.09	Oct.....	\$0.09
Feb.....	.09	May.....	.09	Aug.....	.09	Nov.....	.09
Mar.....	.09	June.....	.09	Sept.....	.09	Dec.....	.09
						Average	\$0.09

NAILS: Cut, 8-penny, fence and common.

[Price per 100-pound keg, f. o. b. Pittsburgh, on the first of each month; quotations computed from base prices published in the Iron Age. See explanation on pages 234 to 236.]

Jan.....	\$2.15	Apr.....	\$2.25	July....	\$2.25	Oct.....	\$2.25
Feb.....	2.20	May.....	2.25	Aug.....	2.25	Nov.....	2.05
Mar.....	2.20	June....	2.25	Sept....	2.25	Dec.....	2.00
						Average	\$2.1968

NAILS: Wire, 8-penny, fence and common.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month; quotations computed from base prices published in the Iron Age. See explanation on pages 234 to 236.]

Jan.....	\$2.00	Apr.....	\$2.10	July.....	\$2.10	Oct.....	\$2.10	
Feb.....	2.00	May.....	2.10	Aug.....	2.10	Nov.....	2.10	
Mar.....	2.10	June.....	2.10	Sept.....	2.10	Dec.....	2.00	
							Average	\$2.0750

PIG IRON: Bessemer.

[Average monthly price per ton in Pittsburgh; quotations from the Bulletin of the American Iron and Steel Association.]

Jan.....	\$22.85	Apr.....	\$21.28	July....	\$18.93	Oct.....	\$16.00
Feb.....	21.91	May....	20.01	Aug....	18.35	Nov....	15.19
Mar.....	21.85	June....	19.72	Sept....	17.22	Dec....	14.40
						Average	\$18.9768

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

METALS AND IMPLEMENTS—(Continued.)

SAWS: Hand, Disston No. 7, 26-inch.

[Price per dozen, to small jobbers, f. o. b. Philadelphia, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$12.60	Apr....	\$12.60	July... 	\$12.60	Oct.....	\$12.60
Feb.....	12.60	May....	12.60	Aug....	12.60	Nov.....	12.60
Mar.....	12.60	June... 	12.60	Sept... 	12.60	Dec.....	12.60
						Average	\$12.60

SHOVELS: Ames No. 2, cast steel, D handle, square point, back strap, black.

[Price per dozen on the first of each month.]

Jan.....	\$8.02	Apr.....	\$8.02	July.....	\$8.02	Oct.....	\$8.02
Feb.....	8.02	May.....	8.02	Aug.....	8.02	Nov.....	8.02
Mar.....	8.02	June.....	8.02	Sept.....	8.02	Dec.....	8.02
						Average	\$8.02

SILVER: Bar, fine.

[Average monthly price per ounce in New York; quotations furnished by the Director of the Mint.]

Jan.....	\$0.48213	Apr.....	\$0.51255	July...	\$0.54500	Oct.....	\$0.60968
Feb.....	.48479	May....	.54775	Aug....	.56076	Nov....	.58745
Mar.....	.49866	June....	.58619	Sept...	.58605	Dec....	.56014
Average							\$0.54208

SPELTER: Western.

[Price per pound in New York on the first of each month; quotations from the Iron Age.]

Jan.....	\$0.0470	Apr.....	\$0.0565-\$0.0575	July.....	\$0.0612-\$0.0625	Oct.....	\$0.0600	
Feb.....	\$0.0495-.0505	May.....	.0575	Aug.....	.0587	Nov.....	.0555	
Mar.....	.0510-.0515	June.....	.0575	Sept.....	.0600	Dec.....	.0525	
							Average	\$0.0558

STEEL BILLETS.

[Average monthly price per ton at mills at Pittsburgh; quotations from the Bulletin of the American Iron and Steel Association.]

Jan.....	\$29.60	Apr.....	\$30.20	July...	\$27.40	Oct.....	\$27.00
Feb.....	30.00	May....	30.25	Aug....	27.00	Nov....	24.00
Mar.....	30.62	June....	28.87	Sept...	27.00	Dec....	23.00
						Average	\$27.9117

STEEL RAILS.

[Average monthly price per ton at mills in Pennsylvania; quotations from the Bulletin of the American Iron and Steel Association.]

Jan.....	\$28.00	Apr.....	\$28.00	July.....	\$28.00	Oct.....	\$28.00	
Feb.....	28.00	May.....	28.00	Aug.....	28.00	Nov.....	28.00	
Mar.....	28.00	June.....	28.00	Sept.....	28.00	Dec.....	28.00	
							Average	\$28.00

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

LUMBER AND BUILDING MATERIALS.

HERICK: Common domestic building.

[Price per thousand on dock in New York on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$5.50-\$6.00	Apr.....	\$4.75-\$5.50	July....	\$4.75-\$5.50	Oct.....	\$6.50-\$7.50
Feb.....	5.50- 6.00	May.....	5.00- 5.50	Aug....	5.00- 6.00	Nov.....	7.00- 7.50
Mar.....	4.75- 5.50	June....	4.75- 5.25	Sept....	6.00- 7.50	Dec.....	7.00- 7.50
						Average	\$5.9063

CARBONATE OF LEAD: American, in oil.

[Price per pound in New York on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Jan.....	\$0.0539	Apr.....	\$0.0637	July.....	\$0.0662	Oct.....	\$0.0613
Feb.....	.0564	May.....	.0662	Aug.....	.0637	Nov.....	.0613
Mar.....	.0564	June.....	.0662	Sept.....	.0637	Dec.....	.0588
						Average	\$0.0615

CEMENT: Portland, domestic.

[Price per barrel in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	\$2.00-\$2.25	Apr.....	\$2.05-\$2.25	July.....	\$2.00-\$2.30	Oct.....	\$1.60-\$1.90
Feb.....	1.90- 2.25	May.....	2.00- 2.25	Aug.....	1.90- 2.10	Nov.....	1.75- 2.00
Mar.....	2.00- 2.25	June....	2.10- 2.30	Sept....	1.90- 2.10	Dec.....	1.65- 1.90
						Average	\$2.0292

CEMENT: Rosendale.

[Price per barrel in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan	\$0.85-\$1.00	Apr	\$0.80-\$0.90	July	\$0.85-\$0.90	Oct	\$0.85
Feb	.90-1.10	May	.85-.96	Aug	.85	Nov	.85
Mar	.90-1.05	June	.85-.85	Sept	.85	Dec	.85
						Average	\$0.8896

DOORS: Pine, unmolded, 2 feet 4 inches by 6 feet 8 inches, 1½ inches thick.

[Price per door in Buffalo on the first of each month.]

Jan.....	\$1.85	Apr.....	\$1.85	July.....	\$1.80	Oct.....	\$1.55
Feb.....	1.86	May.....	1.85	Aug.....	1.70	Nov.....	1.55
Mar.....	1.86	June.....	1.80	Sept.....	1.70	Dec.....	1.40
						Average	\$1.7292

HENLOCK: 2 by 4 inch, 12 to 14 feet long, Pennsylvania stock.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$16.50	Apr.....	\$16.50	July....	\$17.00	Oct.....	\$17.00
Feb.....	16.50	May.....	16.50	Aug.....	17.00	Nov.....	17.00
Mar.....	16.50	June....	17.00	Sept....	17.00	Dec.....	17.00
						Average	\$16.7917

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.
LUMBER AND BUILDING MATERIALS—Continued.

LIME: Eastern, common.

[Price per barrel in New York on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$0.80-\$0.82	Apr....	\$0.75-\$0.77	July...	\$0.75-\$0.77	Oct....	\$
Feb.....	.80-.82	May....	.75-.77	Aug....	.75-.77	Nov....	
Mar....	.75-.77	June..	.75-.77	Sept...	.82	Dec....	\$0.80-
						Average	\$0.

LENSSEED OIL: Raw, city, in barrels.

[Price per gallon in New York on the first of each month; quotations from the Oil, Paint and D Reporter.]

Jan.....	\$0.46	Apr....	\$0.46	July...	\$0.40	Oct....	\$
Feb.....	.46	May....	.44	Aug....	.38	Nov....	
Mar....	.46	June..	.44	Sept...	.37	Dec....	
						Average	\$0.

MAPLE: Hard, 1-inch, firsts and seconds, 6 inches and up wide.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$27.00-\$29.00	Apr....	\$30.00-\$32.00	July...	\$32.00-\$34.00	Oct....	\$32.00-\$3
Feb.....	27.00-29.00	May....	30.00-32.00	Aug....	32.00-34.00	Nov....	32.00-3
Mar....	30.00-32.00	June..	32.00-34.00	Sept...	32.00-34.00	Dec....	32.00-3
						Average	\$31.

OAK: White, plain, 1-inch, 6 inches and up wide.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$40.00-\$45.00	Apr....	\$40.00-\$45.00	July...	\$45.00-\$48.00	Oct.....	\$45.00-
Feb.....	40.00-45.00	May....	40.00-45.00	Aug....	45.00-48.00	Nov....	45.00-
Mar....	40.00-45.00	June..	45.00-48.00	Sept...	45.00-48.00	Dec....	45.00-
						Average	\$

OAK: White, quartered, clear and good seconds, 1-inch, 6 inches and wide, 12 to 16 feet long.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$67.50-\$72.50	Apr....	\$67.50-\$72.50	July...	\$75.00-\$80.00	Oct.....	\$75.
Feb.....	67.50-72.50	May....	67.50-72.50	Aug....	75.00-80.00	Nov....	75
Mar....	67.50-72.50	June..	75.00-80.00	Sept...	75.00-80.00	Dec....	80
						Average	

OXIDE OF ZINC: American, extra dry.

[Price per pound in New York on the first of each month; quotations from the Oil, Paint Reporter.]

Jan.....	\$0.04	Apr....	\$0.04	July...	\$0.04	Oct....	
Feb.....	.04	May....	.04	Aug....	.04	Nov....	
Mar....	.04	June..	.04	Sept...	.04	Dec....	
						Average	

TABLE L.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

LUMBER AND BUILDING MATERIALS—Continued.

PINE: White, boards, No. 2 barn, 1 inch by 10 inches wide, rough.

[Price per M feet in Buffalo on the first of each month; quotations from the New York Lumber Trade Journal.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	\$24.00	Apr....	\$24.00	July...	\$24.00	Oct.....	\$24.00
Feb.....	24.00	May....	24.00	Aug....	24.00	Nov.....	24.00
Mar.....	24.00	June...	24.00	Sept...	24.00	Dec.....	24.00
Average							\$24.00

PINE: White, boards, uppers, 1-inch, 8 inches and up wide, rough.

[Price per M feet in Buffalo on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$80.00	Apr....	\$80.00	July...	\$80.00	Oct.....	\$80.00
Feb.....	80.00	May....	80.00	Aug....	80.00	Nov.....	80.00
Mar.....	80.00	June...	80.00	Sept...	80.00	Dec.....	80.00
Average							\$80.00

PINE: Yellow, long leaf, boards, heart-face sidings, 1-inch and 1½-inch.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$20.50-\$21.50	Apr....	\$20.50-\$21.50	July...	\$20.50-\$21.50	Oct.....	\$20.50-\$21.50
Feb.....	20.50- 21.50	May....	20.50- 21.50	Aug....	20.50- 21.50	Nov.....	20.50- 21.50
Mar.....	20.50- 21.50	June...	20.50- 21.50	Sept...	20.50- 21.50	Dec.....	20.50- 21.50
Average							\$21.00

PLATE GLASS: Polished, unsilvered, area 3 to 5 square feet.

[Price per square foot, f. o. b. New York, on the first of each month.]

Jan.....	\$0.27	Apr....	\$0.27	July...	\$0.27	Oct.....	\$0.24
Feb.....	.27	May....	.27	Aug....	.27	Nov.....	.24
Mar.....	.27	June...	.27	Sept...	.27	Dec.....	.24
Average							\$0.2625

PLATE GLASS: Polished, unsilvered, area 5 to 10 square feet.

[Price per square foot, f. o. b. New York, on the first of each month.]

Jan.....	\$0.44½	Apr....	\$0.44½	July...	\$0.44½	Oct.....	\$0.39
Feb.....	.44½	May....	.44½	Aug....	.44½	Nov.....	.39
Mar.....	.44½	June...	.44½	Sept...	.44½	Dec.....	.39
Average							\$0.4313

POPLAR: Yellow, 1-inch, 8 inches and up wide, firsts and seconds, rough.

[Price per M feet in New York on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	\$45.00	Apr....	\$47.50	July...	\$51.00-\$52.50	Oct.....	\$51.00-\$52.50
Feb.....	46.00	May....	47.50	Aug....	51.00- 52.50	Nov.....	51.00- 52.50
Mar.....	47.50	June...	\$51.00- 52.50	Sept...	51.00- 52.50	Dec.....	51.00- 52.50
Average							\$49.6458

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1903—Continued.

HOUSE FURNISHING GOODS.

EARTHENWARE: Plates, cream-colored, 7-inch.

[Price per dozen, to purchasers of bills amounting to \$8,000, f. o. b. Trenton, N. J., on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	\$0.4775	Apr.	\$0.4775	July ...	\$0.4775	Oct	\$0.4775
Feb.	.4775	May ...	.4775	Aug ...	.4775	Nov ...	.4775
Mar.	.4775	June ...	.4775	Sept ...	.4775	Dec ...	.4775
						Average	\$0.4775

EARTHENWARE: Plates, white granite, 7-inch.

[Price per dozen, to purchasers of bills amounting to \$8,000, f. o. b. Trenton, N. J., on the first of each month.]

Jan	\$0.4988	Apr.....	\$0.4988	July.....	\$0.4988	Oct	\$0.4988
Feb	.4988	May.....	.4988	Aug	.4988	Nov	.4988
Mar	.4988	June....	.4988	Sept.....	.4988	Dec	.4988
						Average	\$0.4988

EARTHENWARE: Teacups and saucers, white granite, with handles.

[Price per gross (6 dozen cups and 6 dozen saucers), to purchasers of bills amounting to \$8,000, f. o. b. Trenton, N. J., on the first of each month.]

Jan	\$3. 6832	Apr.....	\$3. 6832	July ...	\$3. 6832	Oct.....	\$3. 6832
Feb.....	3. 6832	May	3. 6832	Aug	3. 6832	Nov.....	3. 6832
Mar	3. 6832	June ..	3. 6832	Sept ...	3. 6832	Dec.....	3. 6832
						Average	\$3. 6832

FURNITURE: Bedroom sets, ash, 3 pieces, bedstead, bureau, and washstand.

[Price per set in New York on the first of each month.]

Jan.....	\$11.75	Apr.....	\$12.25	July.....	\$12.25	Oct.....	\$12.25
Feb.....	11.75	May.....	12.25	Aug.....	12.25	Nov.....	12.25
Mar.....	12.25	June.....	12.25	Sept.....	12.25	Dec.....	12.25
						Average	\$12.167

FURNITURE: Chairs, bedroom, maple, cane seat.

[Price per dozen in New York on the first of each month.]

Jan.....	\$7.50	Apr.....	\$8.00	July.....	\$8.00	Oct.....	\$8.00	
Feb.....	7.50	May.....	8.00	Aug.....	8.00	Nov.....	8.00	
Mar.....	8.00	June.....	8.00	Sept.....	8.00	Dec.....	8.00	
							Average	\$7.917

FURNITURE: Chairs, kitchen, common spindle.

[Price per dozen in New York on the first of each month.]

[illegible]

FURNITURE: Tables, kitchen, 3½-foot.

[Price per dozen in New York on the first of each month.]

Jan.....	\$15.60	Apr.....	\$15.60	July.....	\$15.60	Oct.....	\$15.60
Feb.....	15.60	May.....	15.60	Aug.....	15.60	Nov.....	15.60
Mar.....	15.60	June.....	15.60	Sept.....	15.60	Dec.....	15.60
						Average	\$15.60

WOODEN WARE: Tubs, oak-grained, 3 in nest.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903.

[For a more detailed description of the articles, see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Farm products.									
	Barley: by sample.		Cattle: steers, choice to extra.		Cattle: steers, good to choice.		Corn: No. 2, cash.		Cotton: upland, middling.	
	Price per bushel.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.	Price per bushel.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899..	\$0.4534	100.0	\$5.3208	100.0	\$4.7347	100.0	\$0.3904	100.0	\$0.07762	100.0
Jan.....	.5600	123.5	5.9938	112.7	5.2250	110.4	.4650	122.2	.08925	115.0
Feb.....	.5413	119.4	5.6313	105.8	5.0000	105.6	.4390	114.6	.09588	123.5
Mar.....	.5288	116.6	5.5960	105.2	5.1350	108.5	.4335	114.0	.10130	130.5
Apr.....	.5250	115.8	5.5688	104.7	5.2875	111.7	.4347	114.3	.10513	135.4
May.....	.5440	120.0	5.4063	101.6	5.1125	108.0	.4488	118.0	.11425	147.2
June.....	.5350	118.0	5.3600	100.7	4.9500	104.5	.4918	129.3	.12440	160.8
July.....	.5170	114.0	5.3188	100.0	4.9438	104.4	.5088	133.8	.12450	160.8
Aug.....	.5363	118.3	5.4488	102.3	4.9813	105.2	.5181	136.2	.12750	164.3
Sept.....	.5900	130.1	5.6750	106.7	5.1400	108.6	.4990	131.2	.12270	158.1
Oct.....	.5770	127.3	5.7438	108.0	5.0813	107.3	.4444	116.8	.09813	126.4
Nov.....	.5769	127.2	5.4875	108.1	4.9625	104.8	.4284	112.6	.11063	142.6
Dec.....	.5619	123.9	5.5600	104.5	4.9400	104.8	.4190	110.1	.12780	164.6
Average, 1903.....	.5494	121.2	5.5678	104.7	5.0615	106.9	.4606	121.1	.11235	144.7

Month.	Farm products.									
	Flaxseed: No. 1.		Hay: timothy, No. 1.		Hides: green, salted, packers, heavy native steers.		Hogs: heavy.		Hogs: light.	
	Price per bushel.	Relative price.	Price per ton.	Relative price.	Price per pound.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.
Average, 1890-1899..	\$1.1182	100.0	\$10.4304	100.0	\$0.0987	100.0	\$4.4123	100.0	\$4.4206	100.0
Jan.....	1.1750	105.6	12.5000	119.8	.1811	139.9	6.6906	151.6	6.4063	144.9
Feb.....	1.1800	106.0	12.8750	118.6	.1243	132.7	7.0750	160.3	6.8188	154.3
Mar.....	1.1400	102.4	12.9000	123.7	.1183	126.3	7.5175	170.4	7.3100	165.4
Apr.....	1.0900	97.9	14.0000	134.2	.1130	120.6	7.3500	166.6	7.1875	162.6
May.....	1.0960	98.4	13.9875	133.6	.1166	124.4	6.6125	149.9	6.3719	144.1
June.....	1.1150	100.2	13.9500	133.7	.1186	126.6	6.0925	138.1	6.0600	136.9
July.....	1.0050	90.3	13.2500	127.0	.1168	124.7	5.4188	122.8	5.6188	127.1
Aug.....	.9500	85.3	12.7500	122.2	.1137	121.3	5.4063	122.5	5.7219	129.4
Sept.....	.9650	86.7	10.8000	103.5	.1194	127.4	5.8560	132.7	6.1525	139.2
Oct.....	.9725	87.4	11.1250	106.7	.1134	121.0	5.5375	125.5	5.8125	131.5
Nov.....	.9850	84.0	10.6250	101.9	.1085	115.8	4.6375	105.1	4.7563	107.6
Dec.....	.9425	84.7	11.1500	106.9	.1086	115.9	4.5475	103.1	4.4950	101.7
Average, 1903.....	1.0471	94.1	12.4279	119.2	.1169	124.8	6.0572	137.3	6.0541	137.0

Month.	Farm products.									
	Hops: New York State, choice.		Oats: cash.		Rye: No. 2, cash.		Sheep: native.		Sheep: West-ern.	
	Price per pound.	Relative price.	Price per bushel.	Relative price.	Price per bushel.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.
Average, 1890-1899..	\$0.1771	100.0	\$0.2688	100.0	\$0.5288	100.0	\$3.7580	100.0	\$3.9541	100.0
Jan.....	.3600	203.3	.3328	123.8	.4888	92.4	3.8188	101.6	4.2500	107.5
Feb.....	.3600	203.3	.3431	127.6	.4972	94.0	4.2988	114.3	4.5488	114.9
Mar.....	.3400	192.0	.3328	123.8	.5018	94.9	5.1000	125.7	4.9850	124.8
Apr.....	.2900	163.7	.3372	125.4	.5025	95.0	4.6563	123.9	5.0125	126.8
May.....	.2350	132.7	.3531	131.4	.4991	94.4	4.6375	123.4	4.8688	123.1
June.....	.2350	132.7	.3390	125.5	.5100	96.4	4.0000	106.4	4.2350	107.1
July.....	.2300	129.9	.3965	148.3	.5044	95.4	3.2500	86.5	3.2313	81.7
Aug.....	.2100	118.6	.3475	129.3	.5160	97.6	3.2375	86.1	3.4313	86.8
Sept.....	.2525	142.6	.3613	134.4	.5613	106.1	2.9150	77.6	3.0700	77.6
Oct.....	.2575	145.4	.3561	133.2	.5475	103.5	2.8125	74.8	2.9988	75.7
Nov.....	.3100	175.0	.3470	129.1	.5350	101.2	2.6813	71.3	2.8000	70.8
Dec.....	.3100	175.0	.3514	130.7	.5165	97.7	3.0800	81.4	3.1750	80.3
Average, 1903.....	.2825	159.5	.3541	131.7	.5156	97.5	3.7101	98.7	3.5799	90.0

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Farm products.				Food, etc.					
	Wheat: contract grades, cash.		Beans: medium, choice.		Bread: crackers, Boston X.		Bread: crackers, soda.		Bread: loaf (Washington market).	
	Price per bushel.	Relative price.	Price per bushel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per loaf.	Relative price.
Average, 1890-1899..	\$0.7610	100.0	\$1.6699	100.0	\$0.0673	100.0	\$0.0718	100.0	\$0.0398	100.0
Jan.....	7413	98.7	2.3875	143.0	.0800	118.9	.0700	97.5	.0400	100.5
Feb.....	7538	100.4	2.3500	140.7	.0800	118.9	.0700	97.5	.0400	100.5
Mar.....	7284	97.0	2.3000	137.7	.0800	118.9	.0700	97.5	.0400	100.5
Apr.....	7588	101.0	2.2375	134.0	.0800	118.9	.0600	83.6	.0400	100.5
May.....	7809	104.0	2.2000	131.7	.0800	118.9	.0600	83.6	.0400	100.5
June.....	7824	104.2	2.3000	137.7	.0800	118.9	.0600	83.6	.0400	100.5
July.....	7936	106.7	2.2875	137.0	.0800	118.9	.0600	83.6	.0400	100.5
Aug.....	8311	110.7	2.2500	134.7	.0700	104.0	.0650	90.5	.0400	100.5
Sept.....	8490	113.0	2.1875	131.0	.0700	104.0	.0650	90.5	.0400	100.5
Oct.....	8186	109.0	2.2750	136.2	.0700	104.0	.0650	90.5	.0400	100.5
Nov.....	7974	106.2	2.2000	131.7	.0700	104.0	.0650	90.5	.0400	100.5
Dec.....	8309	110.6	2.1750	130.2	.0700	104.0	.0650	90.5	.0400	100.5
Average, 1903.....	7895	106.1	2.2625	135.5	.0758	112.6	.0646	90.0	.0400	100.5

Month.	Food, etc.									
	Bread: loaf, homemade (N. Y. market).		Bread: loaf, Vienna (N. Y. market).		Butter: cream- ery, Elgin (Elgin market).		Butter: cream- ery, extra (N. Y. market).		Butter: dairy, New York State.	
	Price per loaf.	Rela- tive price.	Price per loaf.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899.	\$0.0396	100.0	\$0.0396	100.0	\$0.2170	100.0	\$0.2242	100.0	\$0.2024	100.0
Jan.	.0400	101.0	.0400	101.0	.2725	125.6	.2725	121.5	.2544	125.7
Feb.	.0400	101.0	.0400	101.0	.2575	118.7	.2650	118.2	.2419	119.5
Mar.	.0400	101.0	.0400	101.0	.2810	129.5	.2865	127.8	.2610	129.0
Apr.	.0400	101.0	.0400	101.0	.2588	119.3	.2625	117.1	.2475	122.3
May.	.0400	101.0	.0400	101.0	.2075	95.6	.2213	98.7	.2100	103.8
June.	.0400	101.0	.0400	101.0	.2110	97.2	.2154	96.3	.2075	102.5
July.	.0400	101.0	.0400	101.0	.1963	90.5	.2003	89.3	.1913	94.5
Aug.	.0400	101.0	.0400	101.0	.1905	87.8	.1941	86.6	.1794	88.6
Sept.	.0400	101.0	.0400	101.0	.2063	95.1	.2073	92.5	.1915	94.6
Oct.	.0400	101.0	.0400	101.0	.2088	96.2	.2132	95.1	.1906	94.2
Nov.	.0400	101.0	.0400	101.0	.2300	106.0	.2310	103.0	.2013	99.5
Dec.	.0400	101.0	.0400	101.0	.2450	112.9	.2440	108.8	.2080	100.3
Average, 1903.	.0400	101.0	.0400	101.0	.2302	106.1	.2348	104.7	.2150	106.2

Month.	Food, etc.									
	Cheese: N. Y. State, full cream.		Coffee: Rio No. 7.		Eggs: new-laid, fancy, near-by.		Fish: cod, dry, bank, large.		Fish: herring, shore, round.	
	Price per pound.	Rela- tive price.	Price per pound.	Relative price.	Price per dozen.	Relative price.	Price per quintal.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899 ..	\$0.0987	100.0	\$0.1313	100.0	\$0.1963	100.0	\$5.5849	100.0	\$3.7763	100.0
Jan	.1413	143.2	.0538	41.0	.2938	149.7	5.6250	100.7	5.8750	155.6
Feb	.1438	145.7	.0538	41.0	.2166	109.8	5.6250	100.7	5.8750	155.6
Mar	.1445	146.4	.0581	44.2	.1755	89.4	5.6250	100.7	5.8750	155.6
Apr	.1463	148.2	.0544	41.4	.1613	82.2	5.6250	100.7	5.8750	155.6
May	.1166	118.1	.0525	40.0	.1763	89.8	5.6250	100.7	5.8750	155.6
June	.1063	107.7	.0525	40.0	.1860	94.8	5.7500	103.0	5.8750	155.6
July	.1006	101.9	.0538	41.0	.1956	99.6	5.7500	103.0	5.8750	155.6
Aug	.1000	101.3	.0525	40.0	.2275	115.9	5.7500	103.0	5.8750	155.6
Sept	.1105	112.3	.0525	40.0	.2550	129.9	6.1250	109.7	5.8750	155.6
Oct	.1156	117.1	.0575	43.8	.2788	142.0	5.8750	105.2	5.2500	139.0
Nov	.1169	118.4	.0638	48.6	.3488	177.7	6.3750	114.1	5.3750	142.8
Dec	.1200	121.6	.0650	49.5	.3800	198.6	6.6250	118.6	5.2500	139.0
Average, 1903	.1217	123.3	.0669	42.6	.2418	123.2	5.8646	105.0	5.7292	151.7

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Food, etc.									
	Fish: mackerel, salt, large No. 3s.		Fish: salmon, canned.		Flour: buck-wheat.		Flour: rye.		Flour: wheat, spring patents.	
	Price per barrel.	Relative price.	Price per 12 cans.	Relative price.	Price per 100 lbs.	Relative price.	Price per barrel.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899..	\$14.1806	100.0	\$1.4731	100.0	\$1.9428	100.0	\$3.3171	100.0	\$4.2972	100.0
Jan.....	19.0000	134.5	1.5750	106.9	2.3000	118.4	3.3000	99.5	3.9625	92.2
Feb.....	20.0000	141.5	1.6000	108.6	2.2000	113.2	3.2250	97.2	4.0875	94.0
Mar.....	22.5000	159.2	1.6000	108.6	2.0000	102.9	3.0750	92.7	4.0250	93.7
Apr.....	19.0000	134.5	1.6000	108.6	(a)		3.0250	91.2	3.9675	92.8
May.....	19.0000	134.5	1.6000	108.6	(a)		2.9750	89.7	4.1500	96.6
June.....	19.0000	134.5	1.6000	108.6	(a)		2.9750	89.7	4.3550	101.3
July.....	14.3750	101.7	1.5500	105.2	(a)		3.0500	91.9	4.4438	103.4
Aug.....	14.5000	102.6	1.5750	106.9	(a)		3.0500	91.9	4.6625	108.5
Sept.....	16.5000	116.8	1.5750	106.9	2.7500	141.5	3.1750	95.7	4.6800	108.9
Oct.....	14.5000	102.6	1.7250	117.1	2.8500	121.0	3.3250	100.2	4.6063	107.2
Nov.....	15.5000	109.7	1.7250	117.1	2.3750	122.2	3.3250	100.2	4.5063	104.9
Dec.....	15.5000	109.7	1.7250	117.1	2.2750	117.1	3.2750	98.7	4.4900	104.5
Average, 1903.....	17.4479	123.5	1.6208	110.0	2.3214	119.5	3.1479	94.9	4.3303	100.8

Month.	Food, etc.									
	Flour: wheat, winter straights.		Fruit: apples, evaporated, choice.		Fruit: apples, sun-dried, Southern, alced.		Fruit: currants, in barrels.		Fruit: prunes, California, in boxes.	
	Price per barrel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899..	\$3.8450	100.0	\$0.0847	100.0	\$0.0515	100.0	\$0.0375	100.0	\$0.0774	100.0
Jan.....	3.3750	87.8	.0613	72.4	.0475	92.2	.0450	120.0	.0525	67.8
Feb.....	3.4200	89.1	.0613	72.4	.0475	92.2	.0450	120.0	.0513	66.3
Mar.....	3.4200	88.9	.0600	70.8	.0500	97.1	.0431	114.9	.0488	63.0
Apr.....	3.3938	88.3	.0575	67.9	.0463	89.9	.0469	125.1	.0475	61.4
May.....	3.4375	89.4	.0575	67.9	.0425	82.5	.0444	118.4	.0463	59.8
June.....	3.5900	93.4	.0600	70.8	.0425	82.5	.0469	125.1	.0463	59.8
July.....	3.6250	94.3	.0600	70.8	.0425	82.5	.0509	135.7	.0463	59.8
Aug.....	3.6750	95.6	.0638	75.3	.0425	82.5	.0506	134.9	.0463	59.8
Sept.....	3.6900	96.0	.0625	73.8	.0400	77.7	.0494	131.7	.0463	59.8
Oct.....	3.7688	98.0	.0625	73.8	.0400	77.7	.0481	128.3	.0463	59.8
Nov.....	3.8000	98.8	.0650	76.7	.0400	77.7	.0488	130.1	.0463	59.8
Dec.....	3.8600	100.4	.0613	72.4	.0375	72.8	.0525	140.0	.0525	67.8
Average, 1903.....	3.5923	93.4	.0611	72.1	.0432	83.9	.0476	126.9	.0481	62.1

Month.	Food, etc.									
	Fruit: raisins, California, London layer.		Glucose: 41° and 42° mixing.		Lard: prime contract.		Meal: corn, fine white.		Meal: corn, fine yellow.	
	Price per box.	Relative price.	Price per 100 lbs.	Relative price.	Price per pound.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.
Average, 1890-1899..	\$1.5006	100.0	\$1.4182	100.0	\$0.0654	100.0	\$1.0486	100.0	\$1.0169	100.0
Jan.....	1.6500	110.0	1.7500	123.4	.1034	158.1	1.4250	135.9	1.4000	137.7
Feb.....	1.5000	100.0	1.7500	123.4	.1006	153.7	1.4500	138.3	1.4250	140.1
Mar.....	1.6500	103.3	1.8000	130.4	.1030	157.6	1.4250	135.9	1.3750	135.2
Apr.....	1.4500	96.6	1.9250	135.7	.1012	154.7	1.1750	112.1	1.1750	115.5
May.....	1.3500	90.0	1.8000	126.9	.0925	141.4	1.1850	108.2	1.0900	107.2
June.....	1.3500	90.0	1.8000	126.9	.0696	106.9	1.2750	121.6	1.2750	125.4
July.....	1.3500	90.0	1.9500	137.5	.0791	120.9	1.3500	128.7	1.3000	127.8
Aug.....	1.3500	90.0	1.9500	137.5	.0803	122.8	1.3500	128.7	1.2500	122.9
Sept.....	1.3500	90.0	1.9500	137.5	.0879	134.4	1.3000	124.0	1.3250	130.3
Oct.....	1.5000	100.0	1.9500	137.5	.0735	112.4	1.2250	116.8	1.2750	125.4
Nov.....	1.5000	100.0	1.7000	119.9	.0725	110.9	1.3000	124.0	1.2500	122.9
Dec.....	1.4500	96.6	1.7000	119.9	.0698	106.7	1.1500	109.7	1.2000	118.0
Average, 1903.....	1.4468	96.3	1.8396	129.7	.0877	134.1	1.2987	123.7	1.2783	125.7

* No quotation for month.

* Average for 1890-1899.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Food, etc.									
	Meat: bacon, short clear sides.		Meat: bacon, short rib sides.		Meat: beef, fresh, native sides.		Meat: beef, salt, extra mess.		Meat: beef, salt, hams, Western.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899.	\$0.0675	100.0	\$0.0656	100.0	\$0.0771	100.0	\$8.0166	100.0	\$18.0912	100.0
Jan.	.1003	148.6	.0988	150.4	.0897	116.3	10.5500	131.6	21.2500	117.5
Feb.	.1044	154.7	.1022	155.8	.0890	103.8	10.2500	127.9	20.7500	114.7
Mar.	.1104	163.6	.1079	164.5	.0803	104.2	9.8750	125.2	20.7500	114.7
Apr.	.1100	163.0	.1075	163.9	.0819	106.2	9.5625	119.3	20.7500	114.7
May.	.1031	152.7	.1012	154.3	.0807	104.7	9.3500	116.6	20.7500	114.7
June.	.1014	150.2	.0999	152.3	.0778	100.9	8.9875	111.5	20.1500	111.1
July.	.0944	139.9	.0919	140.1	.0760	98.6	8.3750	104.6	21.0000	116.1
Aug.	.0891	132.0	.0853	130.0	.0750	97.3	8.2500	102.9	22.0000	121.6
Sept.	.0841	125.4	.0821	124.4	.0755	97.9	8.2500	102.9	22.2500	123.0
Oct.	.0802	119.6	.0780	118.1	.0757	98.2	8.4500	105.4	22.2500	123.0
Nov.	.0820	121.5	.0803	123.4	.0750	97.3	8.3750	104.5	21.5000	118.8
Dec.	.0732	108.4	.0713	108.7	.0745	96.6	8.5000	106.0	21.2500	117.6
Average, 1903.	.0959	142.1	.0938	143.0	.0784	101.7	9.0673	113.1	21.2115	117.2

Month.	Food, etc.									
	Meat: hams, smoked.		Meat: mutton, dressed.		Meat: pork, salt, mess, old to new.		Milk: fresh.		Molasses: New Orleans, open kettle, prime.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per quart.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899.	\$0.0984	100.0	\$0.0754	100.0	\$11.6332	100.0	\$0.0255	100.0	\$0.3151	100.0
Jan.	.1222	124.2	.0688	91.2	18.2500	156.9	.0350	137.3	.3600	114.2
Feb.	.1266	128.7	.0750	99.5	18.0625	155.3	.0350	137.3	.3600	114.2
Mar.	.1315	133.6	.0880	116.7	18.4750	158.8	.0331	129.8	.3600	114.2
Apr.	.1324	134.6	.0913	121.1	18.4375	158.5	.0312	122.1	.3500	111.1
May.	.1299	132.0	.0900	119.4	18.5000	159.0	.0265	103.9	.3500	111.1
June.	.1270	129.1	.0855	113.4	18.3500	157.7	.0236	92.5	.3500	111.1
July.	.1319	134.0	.0750	99.5	16.8750	145.1	.0225	88.2	.3500	111.1
Aug.	.1347	136.9	.0669	88.7	15.5625	133.8	.0225	88.2	.3600	114.2
Sept.	.1341	136.3	.0655	86.9	15.0750	129.6	.0258	101.2	.3600	114.2
Oct.	.1243	126.3	.0619	82.1	13.4375	115.5	.0284	111.4	.3600	114.2
Nov.	.1204	122.4	.0600	79.6	13.3750	115.0	.0300	117.6	.3600	114.2
Dec.	.1115	113.3	.0635	84.2	13.2750	114.1	.0325	127.5	.3350	106.3
Average, 1903.	.1271	129.2	.0744	98.7	16.6514	143.1	.0288	112.9	.3546	112.5

Month.	Food, etc.									
	Rice: domestic, choice.		Salt: American.		Salt: Ashton's.		Soda: bicarbonate of American.		Spices: nutmegs.	
	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per bushel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899.	\$0.0561	100.0	\$0.7041	100.0	\$2.2033	100.0	\$0.0209	100.0	\$0.1322	100.0
Jan.	.0676	120.5	.6200	88.0	2.2750	103.3	.0125	59.8	.2325	53.8
Feb.	.0591	103.6	.6500	92.3	2.2750	103.3	.0125	59.8	.3100	71.7
Mar.	.0591	103.6	.6200	88.0	2.2750	103.3	.0125	59.8	.3050	70.6
Apr.	.0594	105.9	.6200	88.0	2.1500	97.6	.0125	59.8	.2950	68.3
May.	.0598	104.8	.5700	80.9	2.2500	102.1	.0125	59.8	.2850	65.9
June.	.0598	104.8	.5500	78.1	2.2500	102.1	.0125	59.8	.2900	67.1
July.	.0581	103.6	.5620	79.8	2.2500	102.1	.0125	59.8	.2900	67.1
Aug.	.0581	103.6	.5700	80.9	2.2500	102.1	.0135	64.6	.2900	67.1
Sept.	.0581	103.6	.6150	87.3	2.2500	102.1	.0135	64.6	.2825	65.4
Oct.	.0531	94.7	.6200	88.0	2.2500	102.1	.0135	64.6	.2875	66.5
Nov.	.0519	92.5	.6300	89.1	2.2500	102.1	.0135	64.6	.2950	68.3
Dec.	.0489	87.0	.7500	106.5	2.2500	102.1	.0135	64.6	.2900	67.1
Average, 1903.	.0566	100.9	.6140	87.2	2.2479	102.0	.0129	61.7	.2877	66.6

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Food, etc.									
	Spices: pepper, Singapore.		Starch: pure corn.		Sugar: 89° fair refining.		Sugar: 96° centrifugal.		Sugar: granulated.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899..	\$0.0749	100.0	\$0.0548	100.0	\$0.03996	100.0	\$0.03969	100.0	\$0.04727	100.0
Jan.....	.1269	169.4	.0450	82.1	.03351	83.6	.03825	96.9	.04628	97.9
Feb.....	.1313	175.3	.0513	93.6	.03204	80.3	.03704	93.7	.04576	96.8
Mar.....	.1319	176.1	.0513	93.6	.03265	81.6	.03719	93.6	.04650	98.4
Apr.....	.1263	168.6	.0513	93.6	.03138	78.3	.03606	90.8	.04655	98.5
May.....	.1263	168.6	.0513	93.6	.03174	79.4	.03674	92.0	.04725	100.0
June.....	.1263	168.6	.0513	93.6	.03125	78.0	.03583	90.2	.04719	99.8
July.....	.1313	175.3	.0513	93.6	.03101	77.5	.03632	91.3	.04775	101.0
Aug.....	.1313	175.3	.0513	93.6	.03266	81.6	.03781	95.0	.04825	102.1
Sept.....	.1300	173.6	.0513	93.6	.03375	84.5	.03884	97.8	.04800	101.5
Oct.....	.1288	172.0	.0513	93.6	.03375	84.5	.03877	97.7	.04585	97.0
Nov.....	.1275	170.2	.0513	93.6	.03280	82.0	.03780	95.0	.04453	94.2
Dec.....	.1288	172.0	.0513	93.6	.03100	77.5	.03594	90.5	.04350	92.0
Average, 1903.....	.1289	172.1	.0507	92.5	.03228	80.8	.03720	93.6	.04641	98.2

Month.	Food, etc.									
	Tallow.		Tea: Formosa, fine.		Vegetables, fresh: onions.		Vegetables, fresh: potatoes, Burbank.		Vinegar: cider, Monarch.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per bushel.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899..	\$0.0435	100.0	\$0.2839	100.0	\$3.3995	100.0	\$0.4991	100.0	\$0.1478	100.0
Jan.....	.0596	136.8	.2200	77.5	4.7500	139.7	.4650	93.2	.1300	88.0
Feb.....	.0600	137.9	.2200	77.5	4.0000	117.7	.4613	92.4	.1300	88.0
Mar.....	.0560	128.7	.2200	77.5	4.5000	132.4	.4488	89.9	.1300	88.0
Apr.....	.0544	125.1	.2200	77.5	6.0000	176.5	.4263	85.4	.1300	88.0
May.....	.0522	120.0	.2200	77.5	2.5000	73.5	.5160	103.4	.1800	122.0
June.....	.0500	114.9	.2250	79.3	2.7500	80.9	.7075	141.8	.1300	88.0
July.....	.0466	107.1	.2200	77.5	2.5600	75.3	(a)	.....	.1300	88.0
Aug.....	.0456	104.8	.2200	77.5	1.7500	51.6	(a)	.....	.1300	88.0
Sept.....	.0488	112.2	.2150	75.7	4.0000	117.7	(a)	.....	.1300	88.0
Oct.....	.0463	106.4	.2050	72.2	3.0000	88.2	.5617	112.6	.1300	88.0
Nov.....	.0450	103.4	.2600	91.6	3.5000	103.0	.6100	122.2	.1300	88.0
Dec.....	.0486	111.5	.2600	91.6	3.5000	103.0	.6900	138.2	.1800	122.0
Average, 1903.....	.0510	117.2	.2296	80.9	3.6675	104.9	.5249	105.2	.1300	88.0

Month.	Cloths and clothing.									
	Bags: 2-bushel, Amoskeag.		Blankets: 11-4, 5 pounds to the pair, all wool.		Blankets: 11-4, 5 pounds to the pair, cotton warp, all-wool filling.		Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling.		Boots and shoes: men's brogans, split.	
	Price per bag.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pair.	Relative price.
Average, 1890-1899..	\$0.1399	100.0	\$0.840	100.0	\$0.613	100.0	\$0.424	100.0	\$0.9994	100.0
Jan.....	.1400	100.1	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Feb.....	.1400	100.1	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Mar.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Apr.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
May.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
June.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
July.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Aug.....	.1450	103.6	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Sept.....	.1500	107.2	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Oct.....	.1500	107.2	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Nov.....	.1500	107.2	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Dec.....	.1500	107.2	.925	110.1	.700	114.2	.500	117.9	.9250	92.5
Average, 1903.....	.1468	104.2	.925	110.1	.700	114.2	.500	117.9	.9250	92.5

*No quotation for month.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Cloths and clothing.									
	Boots and shoes: men's calf bal. shoes, Goodyear welt.		Boots and shoes: men's split boots.		Boots and shoes: men's vici kid shoes, Goodyear welt.		Boots and shoes: women's solid grain shoes.		Broadcloths: first quality, black, 54-inch, XXX wool.	
	Price per pair.	Relative price.	Price per 12 pairs.	Relative price.	Price per pair.	Relative price.	Price per pair.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	\$2.376	100.0	\$16.350	100.0	\$2.30	100.0	\$0.8175	100.0	\$1.732	100.0
Jan	2.360	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
Feb	2.350	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
Mar	2.350	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
Apr	2.350	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
May	2.350	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
June	2.350	98.9	18.500	113.1	2.00	87.0	.8750	107.0	1.910	110.3
July	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Aug	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Sept	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Oct	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Nov	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Dec	2.350	98.9	18.500	113.1	2.00	87.0	.9000	110.1	1.910	110.3
Average, 1903	2.350	98.9	18.500	113.1	2.00	87.0	.8875	108.6	1.910	110.3

Month.	Cloths and clothing.									
	Calico: Cochecho prints.		Carpets: Brussels, 5-frame, Bigelow.		Carpets: ingrain, 2-ply, Lowell.		Carpets: Wilton, 5-frame, Bigelow.		Cotton flannels: 2½ yards to the pound.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	\$0.0553	100.0	\$1.0008	100.0	\$0.4752	100.0	\$1.8432	100.0	\$0.0708	100.0
Jan	.0500	90.4	1.0560	105.5	.5040	106.1	1.9440	105.5	.0675	95.6
Feb	.0500	90.4	1.0560	105.5	.5040	106.1	1.9440	105.5	.0675	95.6
Mar	.0500	90.4	1.0560	105.5	.5040	106.1	1.9440	105.5	.0675	95.6
Apr	.0500	90.4	1.0560	105.5	.5040	106.1	1.9440	105.5	.0675	95.6
May	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0700	99.2
June	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0700	99.2
July	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0725	102.7
Aug	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0750	106.2
Sept	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0775	109.8
Oct	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0800	113.3
Nov	.0500	90.4	1.1040	110.3	.5184	109.1	2.0400	110.7	.0825	116.9
Dec	.0550	99.5	1.1040	110.3	.5184	109.1	2.0400	110.7	.0850	120.4
Average, 1903	.0504	91.1	1.0880	108.7	.5156	108.1	2.0080	108.9	.0735	104.1

Month.	Cloths and clothing.									
	Cotton flannels: 3½ yards to the pound.		Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.		Cotton yarns: carded, white, mule-spun, Northern, cones, 10.1.		Cotton yarns: carded, white, mule-spun, Northern, cones, 22.1.		Denims: Amoskeag.	
	Price per yard.	Relative price.	Price per spool (a)	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	\$0.0575	100.0	\$0.031008	100.0	\$0.1608	100.0	\$0.1969	100.0	\$0.1044	100.0
Jan	.0588	102.3	.037240	120.1	.1625	101.1	.1925	97.8	.1050	100.6
Feb	.0588	102.3	.037240	120.1	.1650	102.6	.1950	99.0	.1050	100.6
Mar	.0588	102.3	.037240	120.1	.1725	107.3	.2050	104.1	.1075	103.0
Apr	.0588	102.3	.037240	120.1	.1700	105.7	.2050	104.1	.1100	105.1
May	.0613	106.6	.037240	120.1	.1825	113.5	.2125	107.9	.1100	105.4
June	.0613	106.6	.037240	120.1	.1950	121.3	.2225	113.0	.1150	110.2
July	.0658	111.0	.037240	120.1	.2025	125.9	.2350	119.3	.1150	110.2
Aug	.0650	113.0	.037240	120.1	.2100	130.6	.2350	119.3	.1150	110.2
Sept	.0663	115.3	.037240	120.1	.2000	124.4	.2225	113.0	.1150	110.2
Oct	.0663	115.3	.037240	120.1	.1875	116.6	.2150	109.2	.1150	110.2
Nov	.0675	117.4	.037240	120.1	.1900	118.2	.2175	110.5	.1200	114.9
Dec	.0688	119.7	.037240	120.1	.2050	127.5	.2300	116.8	.1200	114.9
Average, 1903	.0629	109.1	.037240	120.1	.1869	116.2	.2156	109.5	.1127	108.0

a Freight paid.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Cloths and clothing.									
	Drillings: brown, Pepperell.		Drillings: 30-inch, Stark A.		Flannels: white, 4-4, Ballard Vale No. 3.		Ginghams: Amoskeag.		Ginghams: Lancaster.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$0.0572	100.0	\$0.0521	100.0	\$0.3768	100.0	\$0.0583	100.0	\$0.0573	100.0
Jan.	.0575	100.5	.0560	107.5	.4100	108.8	.0650	103.2	.0575	100.3
Feb.	.0575	100.5	.0559	107.3	.4100	108.8	.0650	103.2	.0575	100.3
Mar.	.0575	100.5	.0543	104.2	.4217	111.9	.0650	103.2	.0575	100.3
Apr.	.0575	100.5	.0551	105.8	.4217	111.9	.0650	103.2	.0575	100.3
May	.0600	104.9	.0544	104.4	.4217	111.9	.0650	103.2	.0575	100.3
June	.0625	109.3	.0584	112.1	.4217	111.9	.0650	103.2	.0575	100.3
July	.0650	113.6	.0572	109.8	.4433	117.6	.0650	103.2	.0575	100.3
Aug.	.0650	113.6	.0598	115.0	.4433	117.6	.0650	103.2	.0575	100.3
Sept.	.0650	113.6	.0623	119.6	.4433	117.6	.0650	103.2	.0575	100.3
Oct.	.0650	113.6	.0599	115.0	.4433	117.6	.0650	103.2	.0575	100.3
Nov.	.0650	113.6	.0598	114.8	.4433	117.6	.0650	103.2	.0575	100.3
Dec.	.0650	113.6	.0625	120.0	.4433	117.6	.0650	103.2	.0575	100.3
Average, 1903.	.0619	108.2	.0581	111.5	.4306	114.3	.0650	103.2	.0575	100.3

Month.	Cloths and clothing.									
	Horse blankets: 6 pounds each, all wool.		Hosiery: men's cotton half hose, seamless, fast black, 20 to 22 ounce.		Hosiery: men's cotton half hose, seamless, 84 needles.		Hosiery: women's combed Egyptian cotton hose, high spliced heel.		Hosiery: women's cotton hose, seamless, fast black, 25 to 28 ounce.	
	Price per pound.	Relative price.	Price per 12 pairs.	Relative price.	Price per 12 pairs.	Relative price.	Price per 12 pairs.	Relative price.	Price per 12 pairs.	Relative price.
Average, 1890-1899.	\$0.573	100.0	\$0.9555	100.0	\$0.7845	100.0	\$1.850	100.0	\$0.9310	100.0
Jan.	.675	117.8	b. 7350	b 76.9	.6750	86.0	1.875	101.4	b. 7350	b 78.9
Feb.	.675	117.8	b. 7350	b 76.9	.6750	86.0	1.875	101.4	b. 7350	b 78.9
Mar.	.675	117.8	b. 7350	b 76.9	.6750	86.0	1.875	101.4	b. 7350	b 78.9
Apr.	.675	117.8	c. 7350	c 76.9	.7000	89.2	1.875	101.4	c. 7595	c 81.6
May	.675	117.8	c. 7350	c 76.9	.7000	89.2	1.875	101.4	c. 7595	c 81.6
June	.675	117.8	c. 7350	c 76.9	.7000	89.2	1.875	101.4	c. 7595	c 81.6
July	.675	117.8	c. 7350	c 76.9	.7250	92.4	1.875	101.4	c. 7595	c 81.6
Aug.	.675	117.8	c. 7350	c 76.9	.7250	92.4	1.875	101.4	c. 7595	c 81.6
Sept.	.675	117.8	d. 7840	d 82.1	.7250	92.4	1.875	101.4	d. 8085	d 86.8
Oct.	.675	117.8	d. 7840	d 82.1	.7250	92.4	1.875	101.4	d. 8085	d 86.8
Nov.	.675	117.8	d. 7840	d 82.1	.7250	92.4	1.875	101.4	d. 8085	d 86.8
Dec.	.675	117.8	d. 7840	d 82.1	.7250	92.4	1.875	101.4	d. 8085	d 86.8
Average, 1903.	.675	117.8	e. 7840	e 82.1	.7063	90.0	1.875	101.4	e. 8085	e 86.8

Month.	Cloths and clothing.									
	Leather: harness, oak, packers' hides, heavy, No. 1.		Leather: sole, hemlock, non-acid, Buenos Ayres.		Leather: sole, oak.		Leather: wax calf, 30 to 40 lbs. to the dozen, B grade.		Linen shoe thread: 10s Barbour.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per sq. foot.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899.	\$0.2590	100.0	\$0.1939	100.0	\$0.8363	100.0	\$0.6545	100.0	\$0.8748	100.0
Jan.	.3400	a117.3	.2300	118.6	.3400	113.0	.6600	100.8	.8450	96.7
Feb.	.3400	a117.3	.2300	118.6	.3400	101.1	.6600	100.8	.8450	96.7
Mar.	.3400	a117.3	.2300	118.6	.3950	117.5	.6600	100.8	.8450	96.7
Apr.	.3400	a117.3	.2200	113.5	.3900	116.0	.7000	107.0	.8450	96.7
May	.3200	a110.4	.2200	113.5	.3850	114.5	.7000	107.0	.8450	96.7
June	.3200	a110.4	.2200	113.5	.3850	114.5	.7000	107.0	.8450	96.7
July	.3200	a110.4	.2200	113.5	.3800	113.0	.7000	107.0	.8450	96.7
Aug.	.3500	a120.7	.2300	118.6	.3700	110.0	.7000	107.0	.8450	96.7
Sept.	.3450	a119.0	.2300	118.6	.3700	110.0	.7000	107.0	.8450	96.7
Oct.	.3200	a110.4	.2300	118.6	.3700	110.0	.7000	107.0	.8450	96.7
Nov.	.3200	a110.4	.2300	118.6	.3650	108.5	.7000	107.0	.8450	96.7
Dec.	.3200	a110.4	.2300	118.6	.3600	107.0	.7000	107.0	.8450	96.7
Average, 1903.	.3313	a114.3	.2257	116.9	.3742	111.3	.6900	105.4	.8450	96.7

aAverage for 1893-1899. bSeptember, 1902, price. cApril, 1903, price. dSeptember, 1903, price.

eSeptember, 1903, price. Represents bulk of sales.

fLeather: harness, oak, country middles, 14 pounds and up (except overweights, 20 pounds and up).

gFor method of computing relative price see pages 241 and 242. Average price for 1901 and 1902, \$0.8225.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Cloths and clothing.									
	Linen thread: 3-cord, 200-yard spools, Barbour.		Overcoatings: beaver, Moscow, all wool, black.		Overcoatings: chinchilla, B-rough, all wool.		Overcoatings: chinchilla, cotton warp, C. C. grade.		Overcoatings: covert cloth, light weight, staple.	
	Price per dozen spools.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$0.8722	100.0	\$2.6817	100.0	\$2.1419	100.0	\$0.4983	100.0	\$2.3226	100.0
Jan.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4400	90.1	2.1899	94.0
Feb.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Mar.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Apr.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
May	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
June	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
July	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Aug.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Sept.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Oct.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Nov.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4550	93.2	2.1899	94.0
Dec.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4400	90.1	2.1899	94.0
Average, 1903.	.8870	98.2	2.4413	117.3	2.2088	103.1	.4583	92.8	2.1899	94.0

Month.	Cloths and clothing.									
	Overcoatings: kersey, standard, 27 to 28 ounce.		Print cloths: 28-inch, 64 x 64.		Shawls: standard, all wool, 72 x 144 inch, 42-ounce.		Sheetings: bleached, 10-1, Atlantic.		Sheetings: bleached, 10-4, Pepperell.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price each.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$1.2472	100.0	\$0.02888	100.0	\$4.5787	100.0	\$0.1836	100.0	\$0.1884	100.0
Jan.	1.5750	126.3	.030676	108.1	4.9000	107.0	.1995	108.7	.2200	116.8
Feb.	1.5750	126.3	.032500	114.5	4.9000	107.0	.1982	106.9	.2200	116.8
Mar.	1.5750	126.3	.032500	114.5	4.9000	107.0	.1981	107.9	.2200	116.8
Apr.	1.5750	126.3	.031406	110.7	4.9000	107.0	.1973	107.5	.2200	116.8
May	1.5750	126.3	.030875	108.8	4.9000	107.0	.2112	115.0	.2200	116.8
June	1.5750	126.3	.032341	114.0	4.9000	107.0	.2258	123.0	.2200	116.8
July	1.5750	126.3	.032188	113.4	4.9000	107.0	.2271	123.7	.2200	116.8
Aug.	1.5750	126.3	.032250	113.6	4.9000	107.0	.2247	122.4	.2200	116.8
Sept.	1.5750	126.3	.033138	117.8	4.9000	107.0	(b)		.2200	116.8
Oct.	1.5750	126.3	.032000	112.8	4.9000	107.0	.2325	126.6	.2200	116.8
Nov.	1.5750	126.3	.032341	114.0	4.9000	107.0	.2111	115.1	.2400	127.4
Dec.	1.5750	126.3	.031054	120.0	4.9000	107.0	(b)		.2400	127.4
Average, 1903.	1.5750	126.3	.032156	113.3	4.9000	107.0	.2124	115.7	.2275	120.8

Month.	Cloths and clothing.									
	Sheetings: bleached, 10-1, Wamsutta S. T.		Sheetings: brown, 4-1, Atlantic A.		Sheetings: brown, 4-1, Indian Head.		Sheetings: brown, 4-1, Mass. Mills, Flying Horse brand.		Sheetings: brown, 4-1, Pepperell R.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$0.2949	100.0	\$0.0553	100.0	\$0.0626	100.0	\$0.0525	100.0	\$0.0551	100.0
Jan.	.2925	99.2	.0588	106.3	.0625	99.8	.0575	99.1	.0583	102.2
Feb.	.2925	99.2	.0598	108.1	.0650	103.8	.0588	99.2	.0575	101.1
Mar.	.2925	99.2	.0611	110.5	.0650	103.8	.0600	99.2	.0575	101.1
Apr.	.2925	99.2	.0614	111.0	.0650	103.8	.0600	99.2	.0575	101.1
May	.2925	99.2	.0620	112.1	.0650	103.8	.0613	100.3	.0575	101.1
June	.2925	99.2	.0610	115.7	.0675	107.8	.0625	102.2	.0600	108.9
July	.3150	106.8	.0612	116.1	.0700	111.8	.0625	102.2	.0600	108.9
Aug.	.3150	106.8	.0656	118.6	.0700	111.8	.0675	102.2	.0625	113.1
Sept.	.3150	106.8	.0665	120.3	.0700	111.8	.0675	102.2	.0625	113.1
Oct.	.3150	106.8	.0661	119.5	.0700	111.8	.0675	102.2	.0625	113.1
Nov.	.3150	106.8	.0660	119.3	.0725	115.8	.0650	104.3	.0625	113.1
Dec.	.3150	106.8	.0673	121.7	.0750	119.8	.0675	110.4	.0625	113.1
Average, 1903.	.3038	103.0	.0626	115.0	.0691	108.8	.0623	101.9	.0600	108.7

a Average for 1897-1899.

b No sales during month.

c Sheetings: brown, 4-1, Stark A.A.

d For method of computing relative price, see pages 241 and 242. Average price for 1901, \$0.0575; for 1902, \$0.0566.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Cloths and clothing.									
	Shirts: bleached, 4-4, Fruit of the Loom.		Shirts: bleached, 4-4, Hope.		Shirts: bleached, 4-4, Lonsdale.		Shirts: bleached, 4-4, New York Mills.		Shirts: bleached, 4-4, Wamsutta.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$0.0728	100.0	\$0.0680	100.0	\$0.0727	100.0	\$0.0876	100.0	\$0.0948	100.0
Jan.	.0738	101.4	.0641	101.7	.0713	98.1	.0812	92.7	.0850	100.2
Feb.	.0738	101.4	.0653	103.7	.0725	99.7	.0829	94.6	.0850	100.2
Mar.	.0750	103.0	.0665	105.6	.0725	99.7	.0790	90.2	.0850	100.2
Apr.	.0750	103.0	.0665	105.6	.0750	103.2	.0810	92.5	.0850	100.2
May.	.0763	104.8	.0665	105.6	.0750	103.2	.0839	95.8	.0850	100.2
June.	.0763	104.8	.0665	105.6	.0750	103.2	.0803	91.7	.0850	100.2
July.	.0763	104.8	.0689	109.4	.0775	106.6	.0842	96.1	.0897	105.2
Aug.	.0788	108.2	.0689	109.4	.0775	106.6	.0819	93.5	.0897	105.2
Sept.	.0788	108.2	.0689	109.4	.0775	106.6	.0833	95.6	.0897	105.2
Oct.	.0788	108.2	.0689	109.4	.0775	106.6	.0899	101.6	.0897	105.2
Nov.	.0788	108.2	.0689	109.4	.0775	106.6	.0885	100.7	.0897	105.2
Dec.	.0788	108.2	.0701	111.3	.0775	106.6	.0896	102.3	.0897	105.2
Average, 1903.	.0767	105.4	.0675	107.1	.0756	103.9	.0850	97.0	.0974	102.7

Month.	Cloths and clothing.									
	Silk: raw, Italian, classical.		Silk: raw, Japan, flatures.		Suits: clay worsted diagonal, 12-ounce, Wash. Mills.		Suits: clay worsted diagonal, 16-ounce, Wash. Mills.		Suits: Indigo blue, all wool, 64-in., 14-oz., Middlesex.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$4.2558	100.0	\$4.0187	100.0	\$0.8236	100.0	\$1.0068	100.0	\$1.3230	100.0
Jan.	4.3808	102.9	4.2074	104.7	.9675	117.5	1.1475	114.0	1.4400	108.8
Feb.	4.3808	102.9	4.2569	105.9	.9675	117.5	1.1475	114.0	1.4400	108.8
Mar.	4.3808	102.9	4.2680	106.2	.9675	117.5	1.1475	114.0	1.4400	108.8
Apr.	4.3808	102.9	4.1710	103.8	.9675	117.5	1.1475	114.0	1.4400	108.8
May.	4.4550	104.7	4.1225	102.6	.9675	117.5	1.1475	114.0	1.4400	108.8
June.	4.6530	109.3	4.2074	104.7	.9675	117.5	1.1475	114.0	1.4400	108.8
July.	4.6530	109.3	4.1710	103.8	.9675	117.5	1.1475	114.0	1.4400	108.8
Aug.	4.6085	108.2	4.1468	103.2	.9225	112.0	1.1025	109.5	1.4400	108.8
Sept.	4.6778	109.9	4.1549	103.5	.9225	112.0	1.1025	109.5	1.4400	108.8
Oct.	4.7025	110.5	4.1710	103.8	.9225	112.0	1.1025	109.5	1.4400	108.8
Nov.	4.6530	109.3	4.0013	99.6	.9225	112.0	1.1025	109.5	1.4400	108.8
Dec.	4.3684	102.6	3.7345	92.9	.9225	112.0	1.1025	109.5	1.4400	108.8
Average, 1903.	4.5241	106.3	4.1346	102.9	.9488	115.2	1.1288	112.1	1.4400	108.8

Month.	Cloths and clothing.									
	Suits: Indigo blue, all wool, 16-ounce.		Suits: serge, Washington Mills 6700.		Tie: Amos, keag A. C. A.		Trousers: fancy worsted, 21 to 22 ounce.		Underwear: shirts and drawers, white, all wool, etc.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per garment.	Relative price.
Average, 1890-1899.	\$1.9154	100.0	\$0.7536	100.0	\$0.1061	100.0	\$1.9456	100.0	\$23.31	100.0
Jan.	2.1576	112.6	.7650	101.6	.1050	99.0	2.0925	104.6	23.40	100.4
Feb.	2.1576	112.6	.7650	101.6	.1050	99.0	2.0925	104.6	23.40	100.4
Mar.	2.1576	112.6	.7650	101.6	.1050	99.0	2.0925	104.6	23.40	100.4
Apr.	2.1576	112.6	.7650	101.6	.1050	99.0	2.0925	104.6	23.40	100.4
May.	2.1576	112.6	.7650	101.6	.1050	99.0	2.0925	104.6	23.40	100.4
June.	2.1576	112.6	.7650	101.6	.1100	103.7	2.0925	104.6	23.40	100.4
July.	2.1576	112.6	.7650	101.6	.1150	108.4	2.0925	104.6	23.40	100.4
Aug.	2.1576	112.6	.7425	98.7	.1150	108.4	2.0925	104.6	23.40	100.4
Sept.	2.1576	112.6	.7425	98.7	.1150	108.4	2.0925	104.6	23.40	100.4
Oct.	2.1576	112.6	.7425	98.7	.1150	108.4	2.0925	104.6	23.40	100.4
Nov.	2.1576	112.6	.7425	98.7	.1150	108.4	2.0925	104.6	23.40	100.4
Dec.	2.1576	112.6	.7425	98.7	.1150	108.4	2.0925	104.6	23.40	100.4
Average, 1903.	2.1576	112.6	.7566	100.4	.1104	104.1	2.0925	104.6	23.40	100.4

^a Average for 1895-1899.^b Average for 1892-1899.^c Average for 1892-1899: 22 to 23 ounce.^d For method of computing relative price, see pages 241 and 242.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Cloths and clothing.									
	Underwear: shirts and drawers, white, merino, 60% wool, etc.		Women's dress goods: alpaca, cotton warp, 22-inch, Hamilton.		Women's dress goods: cashmere, all wool, 10-11 twill, 34-inch, Atlantic J.		Women's dress goods: cashmere, cotton warp, 9-twill, 4-4, Atlantic F.		Women's dress goods: cashmere, cotton warp, 22-inch, Hamilton.	
	Price per 12 garments.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899.	\$15.57	100.0	\$0.0680	100.0	\$0.2905	100.0	\$0.1520	100.0	\$0.0758	100.0
Jan.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
Feb.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
Mar.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
Apr.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
May.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
June.	16.20	95.4	.0686	100.9	.3231	111.3	.1642	108.0	.0735	97.0
July.	16.20	95.4	.0686	100.9	.3406	117.2	.1715	112.8	.0735	97.0
Aug.	16.20	95.4	.0686	100.9	.3406	117.2	.1715	112.8	.0735	97.0
Sept.	16.20	95.4	.0686	100.9	.3406	117.2	.1715	112.8	.0735	97.0
Oct.	16.20	95.4	.0686	100.9	.3406	117.2	.1715	112.8	.0760	100.3
Nov.	16.20	95.4	.0711	104.6	.3406	117.2	.1715	112.8	.0760	100.3
Dec.	16.20	95.4	.0711	104.6	.3406	117.2	.1715	112.8	.0760	100.3
Average, 1903	16.20	95.4	.0690	101.5	.3320	114.3	.1679	110.5	.0741	97.8

Month.	Cloths and clothing.									
	Women's dress goods: cashmere, cotton warp, 27-inch, Hamilton.		Women's dress goods: Franklin sackings, 6-4.		Wool: Ohio, fine fleece (X and XX grade), scoured.		Wool: Ohio, medium fleece (1 and 1 grade), scoured.		Worsted yarns: 2-40s, Australian fine.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899.	\$0.0883	100.0	\$0.5151	100.0	\$0.5526	100.0	\$0.4564	100.0	\$1.0188	100.0
Jan.	.0882	99.9	.5037	115.3	.6383	115.5	.4627	101.4	1.2000	117.8
Feb.	.0882	99.9	.5037	115.3	.6480	117.4	.4701	103.0	1.2000	117.8
Mar.	.0882	99.9	.5037	115.3	.6383	115.5	.4627	101.4	1.2000	117.8
Apr.	.0882	99.9	.5037	115.3	.6277	113.6	.4552	99.7	1.2000	117.8
May.	.0882	99.9	.5037	115.3	.6061	109.7	.4403	96.5	1.1750	115.4
June.	.0882	99.9	.5037	115.3	.6170	111.7	.4478	98.1	1.1750	115.4
July.	.0882	99.9	.5037	115.3	.6721	121.6	.4701	103.0	1.1750	115.4
Aug.	.0882	99.9	.5037	115.3	.6721	121.6	.4701	103.0	1.1750	115.4
Sept.	.0882	99.9	.5037	115.3	.6809	123.2	.4701	103.0	1.1750	115.4
Oct.	.0931	105.4	.5037	115.3	.6809	123.2	.4701	103.0	1.1500	112.9
Nov.	.0931	105.4	.5700	110.7	.6809	123.2	.4851	106.3	1.1500	112.9
Dec.	.0931	105.4	.5700	110.7	.6915	125.1	.4851	106.3	1.1500	112.9
Average, 1903	.0894	101.2	.5898	114.5	.6546	118.5	.4658	102.1	1.1771	115.6

Month.	Cloths and clothing.		Fuel and lighting.							
	Worsted yarns: 2-40s, XXXX, white, in skeins.		Candles: Adamantine, 6s, 14-ounce.		Coal: anthracite, broken.		Coal: anthracite, chestnut.		Coal: anthracite, egg.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.
Average, 1890-1899.	\$1.0071	100.0	\$0.0782	100.0	\$3.3669	100.0	\$3.5953	100.0	\$3.5936	100.0
Jan.	1.2300	122.1	.1100	140.7	3.9560	117.5	4.9500	137.7	4.9500	137.7
Feb.	1.2300	122.1	.1100	140.7	4.0000	118.8	4.9500	137.7	4.9500	137.7
Mar.	1.2300	122.1	.1100	140.7	3.9730	118.0	4.9500	137.7	4.9500	137.7
Apr.	1.2300	122.1	.1100	140.7	4.2070	125.0	4.4510	123.8	4.4520	123.9
May.	1.2300	122.1	.1100	140.7	4.3010	127.8	4.5510	126.6	4.5480	126.6
June.	1.2000	119.2	.1100	140.7	4.4015	130.7	4.6415	129.2	4.6487	129.4
July.	1.2000	119.2	.0850	108.7	4.4608	132.5	4.7303	132.1	4.7528	132.3
Aug.	1.2000	119.2	.0800	115.1	4.4744	132.9	4.8504	134.9	4.8500	135.0
Sept.	1.2000	119.2	.0800	115.1	4.4738	131.7	4.9500	137.7	4.9500	137.7
Oct.	1.2000	119.2	.0800	115.1	4.2633	126.6	4.9501	137.7	4.9500	137.7
Nov.	1.2000	119.2	.0900	115.1	4.2178	126.2	4.9518	137.7	4.9500	137.7
Dec.	1.2000	119.2	.0800	115.1	4.2753	127.0	4.9602	137.7	4.9600	137.7
Average, 1903	1.2125	120.4	.0896	127.4	4.2496	126.2	4.8251	134.2	4.8251	134.3

a 52 per cent wool and 48 per cent cotton.

* For method of computing relative price, see page 242.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Fuel and lighting.									
	Coal: anthracite, stove.		Coal: bituminous, Georges Creek (at mine).		Coal: bituminous, Georges Creek (f. o. b. N. Y. Harbor.)		Coal: bituminous, Pittsburgh (Youghiogheny).		Coke: Connellsville, furnace.	
	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per bushel.	Relative price.	Price per ton.	Relative price.
Average, 1890-1899..	\$3. 7949	100. 0	\$0. 8887	100. 0	\$2. 7429	100. 0	\$0. 0643	100. 0	\$1. 6983	100. 0
Jan	4. 9500	130. 4	4. 0000	450. 1	7. 9600	289. 8	.1000	155. 5	4. 0000	235. 5
Feb	4. 9500	130. 4	4. 6000	506. 4	6. 5000	237. 0	.1000	155. 5	4. 0000	235. 5
Mar	4. 9500	130. 4	2. 5000	281. 3	4. 2000	153. 1	.1000	155. 5	4. 0000	235. 5
Apr	4. 4500	117. 3	2. 2500	253. 2	4. 2000	153. 1	.0900	140. 0	3. 8750	228. 2
May	4. 5500	119. 9	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	3. 5000	206. 1
June	4. 6415	122. 3	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	2. 8750	169. 3
July	4. 7501	125. 2	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	2. 7500	161. 9
Aug	4. 8507	127. 8	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	2. 2500	132. 5
Sept	4. 9500	130. 4	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	2. 1250	125. 1
Oct	4. 9500	130. 4	2. 0000	225. 0	3. 8500	140. 4	.0900	140. 0	2. 1250	125. 1
Nov	4. 9510	130. 5	1. 7500	196. 9	3. 6500	133. 1	.0900	140. 0	1. 8750	110. 4
Dec	4. 9502	130. 4	1. 7500	196. 9	3. 6500	133. 1	.0900	140. 0	1. 5750	92. 7
Average, 1903	4. 8245	127. 1	2. 3968	269. 6	4. 4375	161. 8	.0925	143. 9	2. 9125	171. 5

Month.	Fuel and lighting.								Metals and implements.	
	Matches: parlor, domestic.		Petroleum: crude.		Petroleum: refined, for export.		Petroleum: refined, 150° fire test, w. w.		Augers: extra, 4-inch.	
	Price per gross of boxes (2000).	Relative price.	Price per barrel.	Relative price.	Price per gallon.	Relative price.	Price per gallon.	Relative price.	Price each.	Relative price.
Average, 1890-1899..	\$1. 7563	100. 0	\$0. 9102	100. 0	\$0. 0649	100. 0	\$0. 0890	100. 0	\$0. 1608	100. 0
Jan	1. 5000	85. 4	1. 5250	167. 5	.0330	127. 9	.1300	146. 1	.2310	143. 7
Feb	1. 5000	85. 4	1. 5000	164. 8	.0620	126. 3	.1300	146. 1	.2310	143. 7
Mar	1. 5000	85. 4	1. 5000	164. 8	.0620	126. 3	.1300	146. 1	.2310	143. 7
Apr	1. 5000	85. 4	1. 6100	165. 9	.0635	128. 7	.1350	151. 7	.2310	143. 7
May	1. 5000	85. 4	1. 5150	166. 4	.0635	128. 7	.1350	151. 7	.2310	143. 7
June	1. 5000	85. 4	1. 5000	164. 8	.0655	131. 7	.1350	151. 7	.2310	143. 7
July	1. 5000	85. 4	1. 5250	167. 5	.0655	131. 7	.1350	151. 7	.2310	143. 7
Aug	1. 5000	85. 4	1. 5600	171. 4	.0655	131. 7	.1350	151. 7	.2310	143. 7
Sept	1. 5000	85. 4	1. 5725	172. 8	.0655	131. 7	.1350	151. 7	.2310	143. 7
Oct	1. 5000	85. 4	1. 6850	185. 1	.0680	135. 6	.1350	151. 7	.2310	143. 7
Nov	1. 5000	85. 4	1. 7875	196. 4	.0930	143. 3	.1500	168. 5	.2310	143. 7
Dec	1. 5000	85. 4	1. 8838	207. 0	.0950	146. 4	.1500	168. 5	.2310	143. 7
Average, 1903	1. 5000	85. 4	1. 5886	174. 5	.0660	132. 5	.1363	158. 1	.2310	143. 7

Month.	Metals and implements.									
	Axes: M. C. O., Yankee.		Bar iron: best refined, from mill (Pittsburg market).		Bar iron: best refined, from store (Philadelphia market).		Barb wire: galvanized.		Butts: loose joint, cast, 3 x 3 inch.	
	Price each.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per 100 pounds.	Relative price.	Price per pair.	Relative price.
Average, 1890-1899..	\$0. 4693	100. 0	\$0. 0145	100. 0	\$0. 0164	100. 0	\$2. 5261	100. 0	\$0. 0316	100. 0
Jan	.5100	108. 7	.0200	137. 9	.0220	134. 1	2. 6800	106. 1	.0400	128. 6
Feb	.5100	108. 7	.0200	137. 9	.0220	134. 1	2. 7500	108. 9	.0400	128. 6
Mar	.5100	108. 7	.0200	137. 9	.0220	134. 1	2. 8000	110. 8	.0400	128. 6
Apr	.5100	108. 7	.0200	137. 9	.0220	134. 1	2. 7700	109. 7	.0400	128. 6
May	.5100	108. 7	.0200	137. 9	.0216	131. 7	2. 7500	108. 9	.0400	128. 6
June	.5100	108. 7	.0177	122. 1	.0208	126. 8	2. 7500	108. 9	.0400	128. 6
July	.5000	106. 5	.0170	117. 2	.0201	122. 6	2. 7500	108. 9	.0400	128. 6
Aug	.5000	106. 5	.0170	117. 2	.0193	117. 7	2. 7500	108. 9	.0400	128. 6
Sept	.5000	106. 5	.0170	117. 2	.0181	110. 4	2. 7500	108. 9	.0400	128. 6
Oct	.5000	106. 5	.0170	117. 2	.0181	110. 4	2. 7500	108. 9	.0400	128. 6
Nov	.5000	106. 5	.0134	92. 4	.0171	104. 3	2. 7500	108. 9	.0400	128. 6
Dec	.5000	106. 5	.0130	89. 7	.0171	104. 3	2. 6000	102. 9	.0400	128. 6
Average, 1903	.5060	107. 6	.0177	122. 1	.0200	122. 0	2. 7375	108. 4	.0400	128. 6

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Metals and implements.									
	Chisels: extra, socket firmer, 1-inch.		Copper: ingot, lake.		Copper: sheet, hot-rolled (base sizes).		Copper wire: bare.		Doorknobs: steel, bronze plated.	
	Price each.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pair.	Relative price.
Average, 1890-1899...	\$0.1804	100.0	\$0.1234	100.0	\$0.1659	100.0	\$0.1464	100.0	\$0.1697	100.0
Jan.....	.2800	147.8	.1219	98.8	.1800	108.5	.1363	93.1	.2250	132.6
Feb.....	.2800	147.8	.1208	102.8	.1800	108.5	.1425	97.3	.2250	132.6
Mar.....	.2800	147.8	.1363	110.5	.2000	120.6	.1588	108.5	.2250	132.6
Apr.....	.2800	147.8	.1513	122.6	.2000	120.6	.1638	111.9	.2250	132.6
May.....	.2800	147.8	.1500	121.6	.2000	120.6	.1613	110.2	.2250	132.6
June.....	.2800	147.8	.1488	120.6	.2000	120.6	.1588	108.5	.2250	132.6
July.....	.2800	147.8	.1425	115.5	.2000	120.6	.1488	101.6	.2250	132.6
Aug.....	.2800	147.8	.1313	106.4	.2000	120.6	.1475	100.8	.2250	132.6
Sept.....	.2800	147.8	.1381	111.9	.2000	120.6	.1475	100.8	.2250	132.6
Oct.....	.2800	147.8	.1331	107.9	.1800	108.5	.1450	99.0	.2250	132.6
Nov.....	.2800	147.8	.1388	112.5	.1800	108.5	.1438	98.2	.2250	132.6
Dec.....	.2800	147.8	.1225	99.3	.1800	108.5	.1425	97.3	.2250	132.6
Average, 1903.....	.2800	147.8	.1368	110.9	.1917	115.6	.1497	102.3	.2250	132.6

Month.	Metals and implements.									
	Files: 8-inch mill bastard.		Hammers: Maydole No. 14.		Lead: pig.		Lead pipe.		Locks: common mortise.	
	Price per dozen.	Relative price.	Price each.	Relative price.	Price per pound.	Relative price.	Price per 100 lbs.	Relative price.	Price each.	Relative price.
Average, 1890-1899...	\$0.8527	100.0	\$0.3613	100.0	\$0.0381	100.0	\$1.8183	100.0	\$0.0817	100.0
Jan.....	1.0500	123.1	.4660	129.0	.0411	107.9	5.2000	107.9	.0900	110.2
Feb.....	1.0500	123.1	.4660	129.0	.0413	108.4	5.4000	112.1	.0900	110.2
Mar.....	1.0500	123.1	.4660	129.0	.0413	108.4	5.5500	115.2	.0900	110.2
Apr.....	1.0500	123.1	.4660	129.0	.0467	122.6	5.7000	118.3	.0900	110.2
May.....	1.0500	123.1	.4660	129.0	.0438	115.0	5.4000	112.1	.0900	110.2
June.....	1.0500	123.1	.4660	129.0	.0438	115.0	5.1500	106.9	.0900	110.2
July.....	1.0500	123.1	.4660	129.0	.0411	107.9	5.0500	104.8	.0900	110.2
Aug.....	1.0500	123.1	.4660	129.0	.0420	110.2	5.0500	104.8	.0900	110.2
Sept.....	1.0500	123.1	.4660	129.0	.0411	107.9	4.9000	101.7	.0900	110.2
Oct.....	1.0500	123.1	.4660	129.0	.0415	116.8	5.1000	105.8	.0900	110.2
Nov.....	1.0500	123.1	.4660	129.0	.0415	116.8	5.1000	105.8	.0900	110.2
Dec.....	1.0500	123.1	.4660	129.0	.0425	111.5	5.1000	105.8	.0900	110.2
Average, 1903.....	1.0500	123.1	.4660	129.0	.0428	112.3	5.1958	107.8	.0900	110.2

Month.	Metals and implements.									
	Nails: cut, 8-penny, fence and common.		Nails: wire, 8-penny, fence and common.		Pig iron: Bessemer.		Pig iron: foundry No. 1.		Pig iron: foundry No. 2.	
	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.
Average, 1890-1899...	\$1.8275	100.0	\$2.1618	100.0	\$13.7783	100.0	\$14.8042	100.0	\$13.0533	100.0
Jan.....	2.1500	117.6	2.0000	92.5	22.8500	165.8	21.0000	162.1	23.7500	181.9
Feb.....	2.2000	120.4	2.0000	92.5	21.9100	159.0	23.7500	160.4	22.7500	174.3
Mar.....	2.2000	120.4	2.1000	97.1	21.8500	158.6	23.5000	158.7	22.8500	175.1
Apr.....	2.2500	123.1	2.1000	97.1	21.2800	154.1	22.7000	153.3	21.8500	167.4
May.....	2.2500	123.1	2.1000	97.1	20.0100	145.2	21.3700	144.4	21.2500	162.8
June.....	2.2500	123.1	2.1000	97.1	19.7200	143.1	20.6200	139.3	20.7500	159.0
July.....	2.2500	123.1	2.1000	97.1	18.9300	137.4	19.0000	128.3	19.8750	152.3
Aug.....	2.2500	123.1	2.1000	97.1	18.3500	133.2	18.0000	121.6	17.5000	134.1
Sept.....	2.2500	123.1	2.1000	97.1	17.2200	125.0	17.5000	118.2	15.6250	119.7
Oct.....	2.2500	123.1	2.1000	97.1	16.0000	116.1	16.7000	112.8	15.0000	114.9
Nov.....	2.0500	112.2	2.1000	97.1	15.1900	110.2	16.0000	108.1	14.5000	111.1
Dec.....	2.0000	109.4	2.0000	92.5	14.4000	104.5	15.8500	107.1	14.0000	107.3
Average, 1903.....	2.1958	120.2	2.0750	96.0	18.9758	137.7	19.9158	134.5	19.1417	146.6

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Metals and implements.									
	Pig iron: gray forge, South- ern, coke.		Planes: Bailey No. 5.		Quicksilver.		Saws: crosscut, Dixton.		Saws: hand, Dixton No. 7.	
	Price per ton.	Rela- tive price.	Price each.	Rela- tive price.	Price per pound.	Rela- tive price.	Price each.	Rela- tive price.	Price per dozen.	Rela- tive price.
Average, 1890-1899.....	\$11.0692	100.0	\$1.3220	100.0	\$0.5593	100.0	\$1.6038	100.0	\$12.780	100.0
Jan.....	21.0000	189.4	1.5300	115.7	.6400	114.4	1.6038	100.0	12.600	98.6
Feb.....	20.2500	182.6	1.5300	115.7	.6350	113.5	1.6038	100.0	12.600	98.6
Mar.....	20.2500	182.6	1.5300	115.7	.6350	113.5	1.6038	100.0	12.600	98.6
Apr.....	19.2500	173.6	1.5300	115.7	.6400	114.4	1.6038	100.0	12.600	98.6
May.....	18.2500	164.6	1.5300	115.7	.6450	115.3	1.6038	100.0	12.600	98.6
June.....	16.5000	148.8	1.5300	115.7	.6450	115.3	1.6038	100.0	12.600	98.6
July.....	16.1250	145.4	1.5300	115.7	.6300	112.6	1.6038	100.0	12.600	98.6
Aug.....	14.8750	134.1	1.5300	115.7	.6300	112.6	1.6038	100.0	12.600	98.6
Sept.....	14.0000	126.2	1.5300	115.7	.6300	112.6	1.6038	100.0	12.600	98.6
Oct.....	12.3750	111.6	1.5300	115.7	.6200	110.9	1.6038	100.0	12.600	98.6
Nov.....	11.0000	99.2	1.5300	115.7	.6300	112.6	1.6038	100.0	12.600	98.6
Dec.....	10.8750	98.1	1.5300	115.7	.6300	112.6	1.6038	100.0	12.600	98.6
Average, 1908.....	16.2292	146.4	1.5300	115.7	.6342	113.4	1.6038	100.0	12.600	98.6

Month.	Metals and implements.									
	Shovels: Ames No. 2.		Silver: bar, fine.		Spelter: West- ern.		Steel billets.		Steel rails.	
	Price per dozen.	Rela- tive price.	Price per ounce.	Rela- tive price.	Price per pound.	Rela- tive price.	Price per ton.	Rela- tive price.	Price per ton.	Rela- tive price.
Average, 1890-1899 ..	\$7.8658	100.0	\$0.74899	100.0	\$0.0452	100.0	\$21.5262	100.0	\$26.0654	100.0
Jan	8.0200	102.0	.48213	64.4	.0470	104.0	29.6000	137.5	28.0000	107.4
Feb	8.0200	102.0	.48479	64.7	.0600	110.6	30.0000	139.4	28.0000	107.4
Mar	8.0200	102.0	.49355	65.9	.0513	113.5	30.6200	142.2	28.0000	107.4
Apr	8.0200	102.0	.51255	68.4	.0570	126.1	30.2000	140.3	28.0000	107.4
May	8.0200	102.0	.54775	73.1	.0575	127.2	30.2500	140.5	28.0000	107.4
June	8.0200	102.0	.53519	71.5	.0575	127.2	28.8700	134.1	28.0000	107.4
July	8.0200	102.0	.54500	72.8	.0619	136.9	27.4000	127.3	28.0000	107.4
Aug	8.0200	102.0	.56076	74.9	.0688	150.1	27.0000	125.4	28.0000	107.4
Sept	8.0200	102.0	.56605	75.8	.0600	132.7	27.0000	125.4	28.0000	107.4
Oct	8.0200	102.0	.60963	81.4	.0600	132.7	27.0000	125.4	28.0000	107.4
Nov	8.0200	102.0	.56745	75.4	.0555	122.8	24.0000	111.5	28.0000	107.4
Dec	8.0200	102.0	.56014	74.8	.0525	116.2	23.0000	106.8	28.0000	107.4
Average, 1903	8.0200	102.0	.54208	72.4	.0558	123.5	27.9117	129.7	28.0000	107.4

Month.	Metals and implements.									
	Steel sheets: black, No. 27.		Tin: pig.		Tin plates: domestic, Bes- semer, coke, 14 x 20 in.		Trowels: M. C. O. brick, 10 $\frac{1}{2}$ -inch.		Vices: solid box, 50-pound.	
	Price per pound.	Rela- tive price.	Price per pound.	Rela- tive price.	Price per 100 pounds.	Rela- tive price.	Price each.	Rela- tive price.	Price each.	Rela- tive price.
Average, 1890-1899.....	\$0.0224	100.0	\$0.1836	100.0	\$3.4148	100.0	\$0.3400	100.0	\$3.9009	100.0
Jan.....	.0265	118.3	.2800	152.5	3.7900	111.0	.3400	100.0	4.6000	117.9
Feb.....	.0265	118.3	.2870	156.3	3.7900	111.0	.3400	100.0	4.6000	117.9
Mar.....	.0265	118.3	.3061	167.8	3.9900	116.8	.3400	100.0	4.6000	117.9
Apr.....	.0265	118.3	.3025	164.8	3.9900	116.8	.3400	100.0	5.7500	147.4
May.....	.0265	118.3	.3000	163.4	3.9900	116.8	.3400	100.0	5.7500	147.4
June.....	.0270	120.5	.2863	155.9	3.9900	116.8	.3400	100.0	5.1800	132.8
July.....	.0270	120.5	.2819	153.5	3.9900	116.8	.3400	100.0	5.1800	132.8
Aug.....	.0260	116.1	.2840	154.7	3.9900	116.8	.3400	100.0	5.7500	147.4
Sept.....	.0258	115.2	.2713	147.8	3.9900	116.8	.3400	100.0	5.7500	147.4
Oct.....	.0258	115.2	.2618	142.6	3.9900	116.8	.3400	100.0	5.1800	132.8
Nov.....	.0250	111.6	.2575	140.3	3.9900	116.8	.3400	100.0	5.1800	132.8
Dec.....	.0233	104.0	.2590	141.1	3.7900	111.0	.3400	100.0	4.6000	117.9
Average, 1903.....	.0260	116.1	.2816	153.4	3.9400	115.4	.3400	100.0	5.1767	132.7

* Average for the period July, 1894, to December, 1899.

* Average for 1890-1899.

TABLE XL.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Metals and implements.				Lumber and building materials.					
	Wood screws: 1-inch, No. 10, flat head.		Zinc: sheet.		Brick: common domestic.		Carbonate of lead: American, in oil.		Cement: Portland, domestic.	
	Price per gross.	Relative price.	Price per 100 pounds.	Relative price.	Price per M.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899...	\$0.1510	100.0	\$5.3112	100.0	\$5.5625	100.0	\$0.0677	100.0	\$1.9963	100.0
Jan.....	.0920	60.9	5.7500	108.3	5.7500	103.4	.0639	93.4	2.1250	106.4
Feb.....	.0920	60.9	5.7500	108.3	5.7500	103.4	.0664	97.7	2.0750	103.9
Mar.....	.1106	73.2	5.7500	108.3	5.1250	92.1	.0664	97.7	2.1250	106.4
Apr.....	.1106	73.2	6.2100	116.9	5.1250	92.1	.0637	110.4	2.1500	107.7
May.....	.1106	73.2	6.2100	116.9	5.2500	94.4	.0662	114.7	2.1250	106.4
June.....	.1106	73.2	6.2100	116.9	5.0000	89.9	.0662	114.7	2.2000	110.2
July.....	.1106	73.2	6.2100	116.9	5.1250	92.1	.0662	114.7	2.1500	107.7
Aug.....	.1150	76.2	6.2100	116.9	5.5000	94.9	.0637	110.4	2.0000	100.2
Sept.....	.1150	76.2	6.2100	116.9	6.7500	121.3	.0637	110.4	2.0000	100.2
Oct.....	.1150	76.2	6.2100	116.9	7.0000	125.8	.0613	106.2	1.7500	87.7
Nov.....	.1150	76.2	6.2100	116.9	7.2500	130.3	.0613	106.2	1.8750	93.9
Dec.....	.1150	76.2	5.2900	99.6	7.2500	130.3	.0548	101.9	1.7750	88.9
Average, 1903.....	.1093	72.4	6.0183	113.3	5.9063	106.2	.0615	106.6	2.0292	101.6

Lumber and building materials.

Month.	Cement: Rosendale.		Doors: pine.		Hemlock.		Lime: common.		Linseed oil: raw.	
	Price per barrel.	Relative price.	Price per door.	Relative price.	Price per M feet.	Relative price.	Price per barrel.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899...	\$0.8871	100.0	\$1.0929	100.0	\$11.9625	100.0	\$0.8332	100.0	\$0.4585	100.0
Jan.....	.9250	104.3	1.8500	169.3	16.5000	137.9	.8100	97.2	.4600	101.4
Feb.....	1.0000	112.7	1.8500	169.3	16.5000	137.9	.8100	97.2	.4600	101.4
Mar.....	.9750	109.9	1.8500	169.3	16.5000	137.9	.7600	91.2	.4600	101.4
Apr.....	.8500	95.8	1.8500	169.3	16.5000	137.9	.7600	91.2	.4600	101.4
May.....	.9000	101.5	1.8500	169.3	16.5000	137.9	.7600	91.2	.4400	97.0
June.....	.9000	101.5	1.8000	164.7	17.0000	142.1	.7600	91.2	.4400	97.0
July.....	.8750	98.6	1.8000	164.7	17.0000	142.1	.7600	91.2	.4000	88.2
Aug.....	.8500	95.8	1.7000	155.5	17.0000	142.1	.7600	91.2	.3800	83.8
Sept.....	.8500	95.8	1.7000	155.5	17.0000	142.1	.8200	94.4	.3700	81.6
Oct.....	.8500	95.8	1.5500	141.8	17.0000	142.1	.8200	94.4	.3900	86.0
Nov.....	.8500	95.8	1.5500	141.8	17.0000	142.1	.8200	94.4	.3700	81.6
Dec.....	.8500	95.8	1.4000	128.1	17.0000	142.1	.8100	97.2	.3700	81.6
Average, 1903.....	.8896	100.3	1.7292	158.2	16.7917	140.4	.7875	94.5	.4167	91.9

Lumber and building materials.

Month.	Maple: hard.		Oak: white, plain.		Oak: white, quartered.		Oxide of zinc.		Pine: white, boards, No. 2 barn.	
	Price per M feet.	Relative price.	Price per M feet.	Relative price.	Price per M feet.	Relative price.	Price per pound.	Relative price.	Price per M feet.	Relative price.
Average, 1890-1899...	\$26.5042	100.0	\$37.4292	100.0	\$53.6771	100.0	\$0.0400	100.0	\$17.1104	100.0
Jan.....	28.0000	105.6	42.5000	113.5	70.0000	130.4	.0463	115.8	24.0000	140.3
Feb.....	28.0000	105.6	42.5000	113.5	70.0000	130.4	.0463	115.8	24.0000	140.3
Mar.....	31.0000	117.0	42.5000	113.5	70.0000	130.4	.0463	115.8	24.0000	140.3
Apr.....	31.0000	117.0	42.5000	113.5	70.0000	130.4	.0463	115.8	24.0000	140.3
May.....	31.0000	117.0	42.5000	113.5	70.0000	130.4	.0463	115.8	24.0000	140.3
June.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
July.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
Aug.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
Sept.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
Oct.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
Nov.....	33.0000	124.5	46.5000	124.2	77.5000	144.4	.0463	115.8	24.0000	140.3
Dec.....	33.0000	124.5	46.5000	124.2	82.5000	153.7	.0463	115.8	24.0000	140.3
Average, 1903.....	\$1.6667	119.5	44.8333	119.8	74.7917	139.3	.0463	115.8	24.0000	140.3

a Average for 1895-1899.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Lumber and building materials.

Month	Pine: white, boards, uppers.		Pine: yellow.		Plate glass: polished, area 3 to 5 sq. ft.		Plate glass: polished, area 5 to 10 sq. ft.		Poplar.	
	Price per M feet.	Relative price.	Price per M feet.	Relative price.	Price per square foot.	Relative price.	Price per square foot.	Relative price.	Price per M feet.	Relative price.
Average, 1890-1899.	\$46.5542	100.0	\$18.4646	100.0	\$0.3630	100.0	\$0.5190	100.0	\$31.3667	100.0
Jan.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	45.0000	143.5
Feb.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	46.0000	146.7
Mar.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	47.5000	151.4
Apr.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	47.5000	151.4
May.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	47.5000	151.4
June.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	51.7500	165.0
July.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	51.7500	165.0
Aug.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	51.7500	165.0
Sept.	80.0000	171.8	21.0000	113.7	.2700	74.4	.4450	85.7	51.7500	165.0
Oct.	80.0000	171.8	21.0000	113.7	.2400	66.1	.3900	75.1	51.7500	165.0
Nov.	80.0000	171.8	21.0000	113.7	.2400	66.1	.3900	75.1	51.7500	165.0
Dec.	80.0000	171.8	21.0000	113.7	.2400	66.1	.3900	75.1	51.7500	165.0
Average, 1903.	80.0000	171.8	21.0000	113.7	.2625	72.3	.4313	83.1	49.6458	158.3

Lumber and building materials.

Month.	Putty.		Resin: good, strained.		Shingles: cypress.		Shingles: Michigan white pine, 16-in., XXXX.		Spruce.	
	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per M.	Relative price.	Price per M.	Relative price.	Price per M feet.	Relative price.
Average, 1890-1899.	\$0.0158	100.0	\$1.4399	100.0	\$2.8213	100.0	\$3.7434	100.0	\$14.3489	100.0
Jan.	.0225	142.4	1.9250	133.7	2.5000	88.6	3.6500	975.1	18.2500	127.2
Feb.	.0225	142.4	2.1000	145.8	2.5000	88.6	3.6500	975.1	18.2500	127.2
Mar.	.0225	142.4	2.2750	158.0	2.5000	88.6	3.6500	975.1	18.2500	127.2
Apr.	.0113	71.5	2.3000	159.7	2.5000	88.6	3.6500	975.1	18.2500	127.2
May.	.0113	71.5	2.1250	147.6	2.6000	92.2	3.6500	975.1	18.2500	127.2
June.	.0113	71.5	2.0750	144.1	2.6000	92.2	3.6500	975.1	19.0000	132.4
July.	.0113	71.5	2.0625	143.2	2.6000	92.2	3.6500	975.1	19.0000	132.4
Aug.	.0113	71.5	1.9750	137.2	2.6000	92.2	3.6500	975.1	19.0000	132.4
Sept.	.0113	71.5	2.1000	145.8	2.6000	92.2	3.6500	975.1	20.5000	142.9
Oct.	.0113	71.5	2.3000	159.7	2.6000	92.2	3.6500	975.1	20.5000	142.9
Nov.	.0113	71.5	2.7750	192.7	2.6000	92.2	3.6500	975.1	20.5000	142.9
Dec.	.0113	71.5	2.5750	178.8	2.6000	92.2	3.6500	975.1	20.5000	142.9
Average, 1903.	.0141	89.2	2.2156	153.9	2.5667	91.0	3.6500	975.1	19.1875	133.7

Lumber and building materials.

Month.	Tar.		Turpentine: spirits of.		Window glass: American, single, firsts, 6 x 8 to 10 x 15 inch.		Window glass: American, single, thirds, 6 x 8 to 10 x 15 inch.		Alcohol: grain, 94 per cent.	
	Price per barrel.	Relative price.	Price per gallon.	Relative price.	Price per 50 sq. ft.	Relative price.	Price per 50 sq. ft.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899.	\$1.2048	100.0	\$0.3343	100.0	\$2.1511	100.0	\$1.8190	100.0	\$2.2405	100.0
Jan.	1.6000	132.8	.5550	166.0	2.5740	119.6	2.1060	115.8	2.4300	108.5
Feb.	1.6000	132.8	.6550	195.9	2.5740	119.6	2.1060	115.8	2.4100	107.6
Mar.	1.6500	137.0	.6575	196.7	2.5740	119.6	2.1060	115.8	2.4100	107.6
Apr.	1.6500	137.0	.6725	201.2	2.5740	119.6	2.1060	115.8	2.3900	106.7
May.	1.6500	137.0	.4800	143.6	2.5740	119.6	2.1060	115.8	2.3800	106.2
June.	1.6500	137.0	.4900	146.6	2.5740	119.6	2.1060	115.8	2.3800	106.2
July.	1.6500	137.0	.4950	148.1	2.5740	119.6	2.1060	115.8	2.3700	105.8
Aug.	1.6500	137.0	.5250	157.0	2.5740	119.6	2.1060	115.8	2.3700	105.8
Sept.	1.6500	137.0	.5500	164.5	2.5740	119.6	2.1060	115.8	2.3700	105.8
Oct.	1.8000	149.4	.5850	175.0	2.5740	119.6	2.1060	115.8	2.3700	105.8
Nov.	1.8000	149.4	.6000	179.5	2.9700	138.0	2.4300	133.6	2.4300	108.5
Dec.	1.8000	149.4	.5925	177.2	2.9700	138.0	2.4300	133.6	2.4400	108.9
Average, 1903.	1.6792	139.4	.5715	171.0	2.6400	122.7	2.1600	118.7	2.3968	106.9

*Shingles: White pine, 16-inch, XXXX.

*For method of computing relative price, see pages 241 and 242. Average price for 1901, \$2.2925; for 1902, \$2.5670.

TABLE III.—BASE PRICES (AVERAGE FOR 1890-1899), AND MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1903—Cont'd.

[For a more detailed description of the articles see Table I. Average for 1903 computed from quotations in Table I; for explanation of method see pages 223 and 224.]

Month.	Drugs and chemicals.									
	Alcohol: wood, refined, 95 per cent.		Alum: lump.		Brimstone: crude, seconds.		Glycerin: re- fined.		Muriatic acid: 20°.	
	Price per gallon.	Rela- tive price.	Price per pound.	Rela- tive price.	Price per ton.	Rela- tive price.	Price per pound.	Rela- tive price.	Price per pound.	Rela- tive price.
Average, 1890-1899.	\$0.9539	100.0	\$0.0167	100.0	\$20.6958	100.0	\$0.1399	100.0	\$0.0104	100.0
Jan	.6500	68.1	.0175	104.8	25.0000	111.1	.1450	103.6	.0160	153.8
Feb	.6500	68.1	.0175	104.8	22.5000	108.7	.1450	103.6	.0160	153.8
Mar	.6500	68.1	.0175	104.8	22.5000	109.9	.1450	103.6	.0160	153.8
Apr	.6500	68.1	.0165	98.8	22.0000	106.3	.1450	103.6	.0160	153.8
May	.6500	68.1	.0165	98.8	22.2500	107.5	.1450	103.6	.0160	153.8
June	.6500	68.1	.0175	104.8	22.2500	107.5	.1450	103.6	.0160	153.8
July	.6500	68.1	.0175	104.8	22.2500	107.5	.1450	103.6	.0160	153.8
Aug	.6500	57.7	.0175	104.8	22.2500	107.5	.1450	103.6	.0160	153.8
Sept.	.5000	52.4	.0175	104.8	22.2500	107.5	.1450	103.6	.0160	153.8
Oct.	.5000	52.4	.0175	104.8	22.2500	107.5	.1450	103.6	.0160	153.8
Nov	.5000	52.4	.0175	104.8	22.2500	107.5	.1425	101.9	.0160	153.8
Dec	.5000	52.4	.0175	104.8	22.0000	106.3	.1425	101.9	.0160	153.8
Average, 1903	.5917	62.0	.0173	103.6	22.3333	107.9	.1446	103.4	.0160	153.8

Month.	Drugs and chemicals.										House furnishing goods.			
	Opium: natural, in cases.		Quinine: American.		Sulphuric acid: 66°.		Earthenware: plates, cream colored.		Earthenware: plates, white granite.					
	Price per pound.	Rela- tive price.	Price per ounce.	Rela- tive price.	Price per pound.	Rela- tive price.	Price per dozen.	Rela- tive price.	Price per dozen.	Rela- tive price.	Price per dozen.	Rela- tive price.	Price per dozen.	Rela- tive price.
Average, 1890-1899.	\$2.3602	100.0	\$0.2160	100.0	\$0.0089	100.0	\$0.4136	100.0	\$0.4179	100.0				
Jan	2.7250	115.5	.2500	105.7	.0120	134.8	.4775	115.4	.4988	111.4				
Feb	2.7250	115.5	.2500	105.7	.0120	134.8	.4775	115.4	.4988	111.4				
Mar	3.0000	127.1	.2900	113.8	.0120	134.8	.4775	115.4	.4988	111.4				
Apr	2.9500	125.0	.2500	105.7	.0120	134.8	.4775	115.4	.4988	111.4				
May	2.9500	125.0	.2900	105.7	.0130	146.1	.4775	115.4	.4988	111.4				
June	3.2000	135.6	.2400	97.6	.0130	146.1	.4775	115.4	.4988	111.4				
July	3.1750	131.5	.2300	93.5	.0130	146.1	.4775	115.4	.4988	111.4				
Aug	3.5000	148.3	.2100	97.6	.0130	146.1	.4775	115.4	.4988	111.4				
Sept.	3.3000	139.8	.2500	101.6	.0130	146.1	.4775	115.4	.4988	111.4				
Oct.	3.2500	137.7	.2500	101.6	.0130	146.1	.4775	115.4	.4988	111.4				
Nov	3.2000	135.6	.2500	101.6	.0130	146.1	.4775	115.4	.4988	111.4				
Dec	3.0000	127.1	.2500	101.6	.0130	146.1	.4775	115.4	.4988	111.4				
Average, 1903	3.0813	130.6	.2225	102.6	.0127	142.7	.4775	115.4	.4988	111.4				

Month.	House furnishing goods.									
	Earthenware: teacups and saucers, white granite.		Furniture: bedroom sets, ash.		Furniture: chairs, bed- room, maple.		Furniture: chairs, kit- chen.		Furniture: tables, kitchen.	
	Price per gross (6 dozen cups and 6 dozen saucers).	Rela- tive price.	Price per set.	Rela- tive price.	Price per dozen.	Rela- tive price.	Price per dozen.	Rela- tive price.	Price per dozen.	Rela- tive price.
Average, 1890-1899.	\$3.4292	100.0	\$10.555	100.0	\$6.195	100.0	\$3.8255	100.0	\$14.435	100.0
Jan	3.6832	107.4	11.750	111.3	7.500	121.1	5.0000	130.7	15.600	108.1
Feb	3.6832	107.4	11.750	111.3	7.500	121.1	5.0000	130.7	15.600	108.1
Mar	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Apr	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
May	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
June	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
July	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Aug	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Sept.	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Oct.	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Nov	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Dec	3.6832	107.4	12.250	116.1	8.000	129.1	5.0000	130.7	15.600	108.1
Average, 1903	3.6832	107.4	12.167	115.3	7.917	127.8	5.0000	130.7	15.600	108.1

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Food, etc.								
	Beans: medium, choice.	Bread.							Average.
		Crackers.			Loaf.				
		Boston X.	Soda.	Average.	Washing- ton market.	Home- made (N. Y. market).	Vienna (N. Y. market).	Average.	
Jan.	143.0	118.9	97.5	106.2	100.5	101.0	101.0	100.8	103.8
Feb.	140.7	118.9	97.5	106.2	100.5	101.0	101.0	100.8	103.8
Mar.	137.7	118.9	97.5	106.2	100.5	101.0	101.0	100.8	103.8
Apr.	134.0	118.9	83.6	101.3	100.5	101.0	101.0	100.8	101.0
May.	131.7	118.9	83.6	101.3	100.5	101.0	101.0	100.8	101.0
June.	137.7	118.9	83.6	101.3	100.5	101.0	101.0	100.8	101.0
July.	137.0	118.9	83.6	101.3	100.5	101.0	101.0	100.8	101.0
Aug.	134.7	104.0	90.5	97.3	100.5	101.0	101.0	100.8	99.4
Sept.	131.0	104.0	90.5	97.3	100.5	101.0	101.0	100.8	99.4
Oct.	136.2	104.0	90.5	97.3	100.5	101.0	101.0	100.8	99.4
Nov.	131.7	104.0	90.5	97.3	100.5	101.0	101.0	100.8	99.4
Dec.	130.2	104.0	90.5	97.3	100.5	101.0	101.0	100.8	99.4
1908.	135.5	112.6	90.0	101.3	100.5	101.0	101.0	100.8	101.0

Month.	Food, etc.											
	Butter.				Cheese: N. Y. State, full cream.	Coffee: Rio No. 7.	Eggs: new-laid, fancy, near-by.	Fish.				
	Cream- ery, Elgin (Elgin mar- ket).	Cream- ery, extra (N. Y. mar- ket).	Dairy, New York State.	Aver- age.				Cod, dry, bank, large.	Her- ring, shore, round.	Mack- erel, salt, large No. 3a.	Salmon, canned.	Aver- age.
Jan....	125.6	121.5	125.7	124.3	143.2	41.0	149.7	100.7	155.6	134.5	106.9	124.4
Feb....	118.7	118.2	119.5	118.8	145.7	41.0	109.8	100.7	155.6	141.5	108.6	126.6
Mar....	129.5	127.8	129.0	128.8	146.4	44.2	89.4	100.7	155.6	159.2	108.6	131.0
Apr....	119.3	117.1	122.3	119.6	148.2	41.4	82.2	100.7	155.6	134.5	108.6	124.9
May....	96.6	98.7	103.8	99.4	118.1	40.0	89.8	100.7	155.6	134.5	108.6	124.9
June....	97.2	96.3	102.5	98.7	107.7	40.0	94.8	103.0	155.6	134.5	108.6	125.4
July....	90.5	89.3	94.5	91.4	101.9	41.0	99.6	103.0	155.6	101.7	105.2	116.4
Aug....	87.8	86.6	88.6	87.7	101.3	40.0	115.9	103.0	155.6	102.6	106.9	117.0
Sept....	95.1	92.5	94.6	94.1	112.0	40.0	129.9	109.7	155.6	116.8	106.9	122.8
Oct....	96.2	95.1	94.2	95.2	117.1	43.8	152.0	105.2	139.0	102.6	117.1	116.0
Nov....	106.0	103.0	99.5	102.8	118.4	48.6	177.7	114.1	142.3	109.7	117.1	120.8
Dec....	112.9	106.8	100.3	107.3	121.6	49.5	198.6	118.6	139.0	109.7	117.1	121.1
1903....	106.1	104.7	106.2	106.7	123.3	42.6	123.2	106.0	151.7	123.5	110.0	122.6

Month.	Food, etc.								Fruit.		
	Flour.						Fruit.				
	Buck- wheat.	Rye.	Wheat.			Average.	Evapo- rated, choice.	Apples.			
			Spring patents.	Winter straights.	Average.			Sun-dried, Southern, sliced.	Average.		
Jan.	118.4	99.5	92.2	87.8	90.0	99.5	72.4	92.2	82.3		
Feb.	118.2	97.2	94.0	89.1	91.6	98.4	72.4	92.2	82.3		
Mar.	102.9	92.7	93.7	88.9	91.3	94.6	70.8	97.1	84.0		
Apr.	102.9	91.2	92.8	88.3	90.6	93.8	67.9	89.9	78.9		
May.	102.9	89.7	96.6	89.4	93.0	94.7	67.9	82.5	75.2		
June.	102.9	89.7	101.3	93.4	97.4	96.8	70.8	82.5	76.7		
July.	102.9	91.9	103.4	94.3	98.9	98.1	70.8	82.5	76.7		
Aug.	102.9	91.9	108.5	95.6	102.1	99.7	75.3	82.5	73.9		
Sept.	141.5	95.7	106.9	96.0	102.5	110.5	73.8	77.7	75.8		
Oct.	121.0	100.2	107.2	98.0	102.6	106.6	73.8	77.7	75.8		
Nov.	122.2	100.2	104.9	98.8	101.9	106.5	76.7	77.7	77.2		
Dec.	117.1	98.7	104.5	100.4	102.5	105.2	72.4	72.8	72.6		
1903.	119.5	94.9	100.8	98.4	97.1	102.2	72.1	88.9	73.0		

* Nominal price; see explanation on page 243.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Food, etc.				Glucose: 41° and 42° mix- ing. (a)	Lard: prime contract.	Meal: corn.		
	Currents, in barrels.	Prunes, California, in boxes.	Raisins, California, London layer.	Average.			Fine white.	Fine yellow.	Average.
Jan.	120.0	67.8	110.0	92.5	123.4	158.1	135.9	137.7	136.8
Feb.	120.0	66.3	100.0	90.2	123.4	153.7	138.3	140.1	139.2
Mar.	114.9	63.0	103.3	89.8	130.4	157.5	135.9	135.2	135.6
Apr.	125.1	61.4	96.6	88.2	135.7	154.7	112.1	115.5	112.8
May	118.4	59.8	90.0	83.7	126.9	141.4	108.2	107.2	107.7
June	125.1	59.8	90.0	85.6	128.9	136.9	121.6	125.4	123.6
July	135.7	59.8	90.0	87.8	137.5	120.9	128.7	127.8	128.3
Aug.	134.9	59.8	90.0	88.6	137.5	122.8	128.7	122.9	125.8
Sept.	131.7	59.8	90.0	86.6	137.5	134.4	124.0	130.3	127.2
Oct.	128.3	59.8	100.0	87.9	137.6	112.4	116.8	125.4	121.1
Nov.	130.1	59.8	100.0	88.9	119.9	110.9	124.0	122.9	123.5
Dec.	140.0	67.8	96.6	89.9	119.9	106.7	109.7	118.0	113.9
1903.	126.9	62.1	96.3	88.3	129.7	134.1	123.7	125.7	124.7

Month.	Food, etc.									
	Beef.				Pork.				Mutton, dressed.	Average.
	Fresh, native sides.	Salt, extra mess.	Salt, hams, West- ern.	Average.	Bacon, short clear sides.	Bacon, short rib sides.	Hams, smoked.	Salt, mess, old to new.		
Jan.	116.3	131.6	117.5	121.8	148.6	150.6	124.2	156.9	145.1	129.6
Feb.	103.8	127.9	114.7	115.5	154.7	155.8	128.7	155.3	148.6	130.1
Mar.	104.2	123.2	114.7	114.0	163.6	164.5	133.6	158.8	155.1	116.7
Apr.	106.2	119.3	114.7	113.4	163.0	163.9	134.6	158.5	155.0	121.1
May	104.7	116.6	114.7	112.0	152.7	154.3	132.0	159.0	149.5	119.4
June	100.9	111.5	111.4	107.9	150.2	152.3	129.1	157.7	147.3	113.4
July	98.6	104.5	116.1	106.4	139.9	140.1	134.0	145.1	139.8	99.5
Aug.	97.3	102.9	121.6	107.3	132.0	130.0	136.9	133.8	133.2	88.7
Sept.	97.9	102.9	123.0	107.9	139.4	140.4	136.3	129.6	136.4	86.9
Oct.	98.2	105.4	123.0	108.9	133.6	134.1	126.3	115.5	127.4	82.1
Nov.	97.3	104.5	118.8	106.9	121.5	122.4	122.4	115.0	120.3	79.6
Dec.	96.6	106.0	117.5	106.7	108.1	108.7	113.3	114.1	111.1	84.2
1903.	101.7	113.1	117.2	110.7	142.1	143.0	129.2	143.1	139.4	98.7

Month.	Food, etc.									
	Milk: fresh.	Molasses: New Or- leans, open kettle, prime.	Rice: dome- stic, choice.	Ameri- can.	Salt: Ash- ton's.	Average.	Soda: bicarbo- nate of, Ameri- can.	Spices.	Average.	Starch: pure corn.
								Nut- megs.	Pepper, Singa- pore.	
Jan.	137.3	114.2	102.5	88.0	103.3	95.7	59.8	53.8	169.4	111.6
Feb.	137.3	114.2	103.6	92.3	103.3	97.8	59.5	71.7	175.3	123.5
Mar.	129.8	114.2	103.6	88.0	103.3	95.7	59.8	70.6	176.1	123.4
Apr.	122.4	111.1	105.9	88.0	97.6	92.8	59.8	68.3	168.6	118.5
May	103.9	111.1	104.8	80.9	102.1	91.5	59.8	65.9	168.6	117.3
June	92.5	111.1	104.8	78.1	102.1	90.1	59.8	67.1	168.6	117.9
July	88.2	111.1	103.6	79.8	102.1	91.0	59.8	67.1	175.3	121.2
Aug.	88.2	114.2	103.6	80.9	102.1	91.5	64.6	67.1	175.3	121.2
Sept.	101.2	114.2	103.6	87.3	102.1	94.7	64.6	65.4	173.6	119.5
Oct.	111.4	114.2	94.7	89.4	102.1	95.8	64.6	66.5	172.0	119.3
Nov.	117.6	114.2	92.5	89.4	102.1	95.8	64.6	68.3	170.2	119.3
Dec.	127.5	106.3	87.0	106.5	102.1	104.3	64.6	67.1	172.0	119.6
1903.	112.9	112.5	100.9	87.2	102.0	94.6	61.7	66.6	172.1	119.4

^a Average for 1893-1899=100

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Food, etc.										
	Sugar.				Tallow.	Tea: Formosa, fine.	Vegetables, fresh.			Vinegar: cider, Monarch.	Average, food, etc.
	89° fair refining.	96° centrifugal.	Granulated.	Average.			Onions.	Potatoes, Burbank.	Average.		
Jan....	98.6	98.9	97.9	98.5	136.8	81.0	139.7	93.2	116.5	88.0	112.3
Feb....	94.3	95.7	96.8	95.6	137.9	81.0	117.7	92.4	105.1	88.0	111.4
Mar....	96.1	96.1	98.4	96.9	128.7	81.0	132.4	89.9	111.2	88.0	112.3
Apr....	92.3	93.2	98.5	94.7	125.1	81.0	176.5	85.4	131.0	88.0	110.0
May....	93.4	95.0	100.0	96.1	120.0	81.0	73.5	103.4	88.5	88.0	104.8
June....	92.0	92.6	99.8	94.8	114.9	79.3	80.9	141.8	111.4	88.0	105.6
July....	91.3	93.9	101.0	95.4	107.1	77.5	75.3	141.8	108.6	88.0	103.8
Aug....	96.1	97.7	102.1	98.6	104.8	77.5	51.5	141.8	96.7	88.0	103.1
Sept....	99.3	100.4	101.5	100.4	112.2	75.7	117.7	141.8	129.8	88.0	107.1
Oct....	99.3	100.2	97.0	98.8	105.4	72.2	88.2	116.5	102.4	88.0	104.4
Nov....	96.5	97.7	94.2	96.1	103.4	91.6	103.0	122.2	112.6	88.0	105.6
Dec....	91.2	92.9	92.0	92.0	111.5	91.6	103.0	126.2	114.6	88.0	105.6
1903....	95.0	96.1	98.2	96.4	117.2	80.9	104.9	105.2	105.1	88.0	107.1

Month.	Cloths and clothing.									
	Bags: 2-bu., Amoskeag.	Blankets.				Boots and shoes.				
		11-4, all wool.	11-4, cotton warp, all wool filling.	11-4, cotton warp, cotton and wool filling.	Average.	Men's brogans, split.	Men's calf bal. shoes, Good-year welt.	Men's split boots.	Men's vicl kid shoes, Good-year welt.	Women's solid-grain shoes.
Jan....	100.1	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
Feb....	100.1	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
Mar....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
Apr....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
May....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
June....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	107.0
July....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
Aug....	108.6	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
Sept....	107.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
Oct....	107.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
Nov....	107.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
Dec....	107.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	110.1
1903....	104.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	108.6

Month.	Cloths and clothing.								
	Broad-cloths: first quality, black, 64-inch, XXX wool.	Calico: Cochecho prints.	Carpets.				Cotton flannels.		
			Brussels, 5-frame, Bigelow.	Ingrain, 2-ply Lowell.	Wilton, 5-frame, Bigelow.	Average.	2½ yards to the pound.	3½ yards to the pound.	Average.
Jan....	110.3	90.4	105.5	106.1	105.5	105.7	95.6	102.3	99.0
Feb....	110.3	90.4	105.5	106.1	105.5	105.7	95.6	102.3	99.0
Mar....	110.3	90.4	105.5	106.1	105.5	105.7	95.6	102.3	99.0
Apr....	110.3	90.4	105.5	106.1	105.5	105.7	95.6	102.3	99.0
May....	110.3	90.4	110.3	109.1	110.7	110.0	99.2	106.6	102.9
June....	110.3	90.4	110.3	109.1	110.7	110.0	99.2	106.6	102.9
July....	110.3	90.4	110.3	109.1	110.7	110.0	102.7	111.0	105.9
Aug....	110.3	90.4	110.3	109.1	110.7	110.0	106.2	113.0	109.6
Sept....	110.3	90.4	110.3	109.1	110.7	110.0	109.8	115.3	112.6
Oct....	110.3	90.4	110.3	109.1	110.7	110.0	113.3	115.3	114.3
Nov....	110.3	90.4	110.3	109.1	110.7	110.0	116.9	117.4	117.2
Dec....	110.3	99.5	110.3	109.1	110.7	110.0	120.4	119.7	120.1
1903....	110.3	91.1	108.7	106.1	106.9	106.6	104.1	109.4	106.8

* Nominal price; see explanation on page 242.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Cloths and clothing.								
	Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.	Cotton yarns.			Denims: Amos-keag.	Drillings.			Flannels: white, 4-4, Ballard Vale No. 8.
		Carded, white, mule-spun, Northern, cones, 10/1.	Carded, white, mule-spun, Northern, cones, 22/1.	Average.		Brown, Pepperell.	30-inch, Stark A.	Average.	
Jan.....	120.1	101.1	97.8	99.5	100.6	100.5	107.5	104.0	108.8
Feb.....	120.1	102.6	99.0	100.8	100.6	100.5	107.3	103.9	108.8
Mar.....	120.1	107.3	104.1	105.7	103.0	100.5	104.2	102.4	111.9
Apr.....	120.1	105.7	104.1	104.9	105.4	100.5	105.8	103.2	111.9
May.....	120.1	113.5	107.9	110.7	105.4	104.9	104.4	104.7	111.9
June.....	120.1	121.3	113.0	117.2	110.2	109.3	112.1	110.7	111.9
July.....	120.1	125.9	119.3	122.6	110.2	113.6	109.8	111.7	117.6
Aug.....	120.1	130.6	119.3	125.0	110.2	113.6	116.7	115.2	117.6
Sept.....	120.1	124.4	113.0	118.7	110.2	113.6	119.6	116.6	117.6
Oct.....	120.1	116.6	109.2	112.9	110.2	113.6	115.0	114.3	117.6
Nov.....	120.1	118.2	110.5	114.4	114.9	113.6	114.8	114.2	117.6
Dec.....	120.1	127.5	116.8	122.2	114.9	113.6	120.0	116.8	117.6
1903.....	120.1	116.2	109.5	112.9	108.0	108.2	111.5	109.9	114.3

Month.	Cloths and clothing.								
	Ginghams.			Horse blankets: 6 pounds each, all wool.	Hosiery.				
	Amos-keag.	Lancaster.	Average.		Men's cotton half hose, seamless, fast black, 20 to 22 oz.	Men's cotton half hose, seamless, 84 needles.	Women's combed Egyptian cotton hose, high spliced heel. (a)	Women's cotton hose, seamless, fast black, 26 to 28 oz.	Average.
Jan.....	103.2	100.3	101.8	117.8	b 76.9	86.0	101.4	b 78.9	85.8
Feb.....	103.2	100.3	101.8	117.8	b 76.9	86.0	101.4	b 78.9	85.8
Mar.....	103.2	100.3	101.8	117.8	b 76.9	86.0	101.4	b 78.9	85.8
Apr.....	103.2	100.3	101.8	117.8	76.9	89.2	101.4	81.6	87.3
May.....	103.2	100.3	101.8	117.8	c 76.9	89.2	101.4	c 81.6	87.3
June.....	103.2	100.3	101.8	117.8	c 76.9	89.2	101.4	c 81.6	87.3
July.....	103.2	100.3	101.8	117.8	c 76.9	92.4	101.4	c 81.6	88.1
Aug.....	103.2	100.3	101.8	117.8	c 76.9	92.4	101.4	c 81.6	88.1
Sept.....	103.2	100.3	101.8	117.8	82.1	92.4	101.4	86.8	90.7
Oct.....	103.2	100.3	101.8	117.8	d 82.1	92.4	101.4	d 86.8	90.7
Nov.....	103.2	100.3	101.8	117.8	d 82.1	92.4	101.4	d 86.8	90.7
Dec.....	103.2	100.3	101.8	117.8	d 82.1	92.4	101.4	d 86.8	90.7
1903.....	103.2	100.3	101.8	117.8	e 82.1	90.0	101.4	e 86.8	90.1

Month.	Cloths and clothing.					Linen thread.		
	Leather.				Average.			Average.
	Harness, oak.	Sole, hemlock, non-acid, Buenos Ayres.	Sole, oak.	Wax calf, 30 to 40 lbs. to the dozen, B grade.		Shoe, 10s, Barbour.	3-cord, 200 yard spools, Barbour.	
Jan.....	117.3	118.6	113.0	100.8	112.4	96.7	98.2	97.5
Feb.....	117.3	118.6	101.1	100.8	109.5	96.7	98.2	97.5
Mar.....	117.3	118.6	117.5	100.8	113.6	96.7	98.2	97.5
Apr.....	117.3	113.5	116.0	107.0	113.5	96.7	98.2	97.5
May.....	110.4	113.5	114.5	107.0	111.4	96.7	98.2	97.5
June.....	110.4	113.5	114.5	107.0	111.4	96.7	98.2	97.5
July.....	110.4	113.5	113.0	107.0	111.0	96.7	98.2	97.5
Aug.....	120.7	118.6	110.0	107.0	114.1	96.7	98.2	97.5
Sept.....	119.0	118.6	110.0	107.0	113.7	96.7	98.2	97.5
Oct.....	110.4	118.6	110.0	107.0	111.5	96.7	98.2	97.5
Nov.....	110.4	118.6	108.5	107.0	111.1	96.7	98.2	97.5
Dec.....	110.4	118.6	107.0	107.0	110.8	96.7	98.2	97.5
1903.....	114.3	116.9	111.3	105.4	112.0	96.7	98.2	97.5

a Average for 1893-1899=100.

b Computed from September, 1902, price.

c Computed from April, 1903, price.

d Computed from September, 1903, price.

e Computed from September, 1903, price, which represents bulk of sales during the year.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Cloths and clothing.						Print cloths: 28-inch, 64 x 64.	Shawls: standard, all wool, 72 x 144 inch, 42-ounce.
	Overcoatings.					Average.		
	Beaver, Moscow, all wool, black.	Chinchilla, Brough, all wool.	Chinchilla, cotton warp, C. C. grade.	Covert cloth, light weight, staple.	Kersey, standard, 27 to 28 ounce. (a)			
Jan....	117.8	108.1	90.1	94.0	126.3	106.2	108.1	107.0
Feb....	117.3	108.1	93.2	94.0	126.3	106.8	114.5	107.0
Mar....	117.3	108.1	93.2	94.0	126.3	106.8	114.5	107.0
Apr....	117.3	108.1	93.2	94.0	126.3	106.8	110.7	107.0
May....	117.3	108.1	93.2	94.0	126.3	106.8	108.8	107.0
June....	117.8	108.1	93.2	94.0	126.3	106.8	114.0	107.0
July....	117.3	108.1	93.2	94.0	126.3	106.8	113.4	107.0
Aug....	117.3	108.1	93.2	94.0	126.3	106.8	113.6	107.0
Sept....	117.3	108.1	93.2	94.0	126.3	106.8	117.8	107.0
Oct....	117.3	108.1	95.2	94.0	126.3	107.2	112.8	107.0
Nov....	117.3	108.1	93.2	94.0	126.3	106.8	114.0	107.0
Dec....	117.3	108.1	90.1	94.0	126.3	106.2	120.0	107.0
1903....	117.3	108.1	92.8	94.0	126.3	106.7	113.3	107.0

	Cloths and clothing.									
	Sheetings.									
Month.	Bleached.				Brown.					Average.
	10-4, Atlantic.	10-4, Pepperell.	10-4, Wamsutta S. T.	Average.	4-4, Atlantic A.	4-4, Indian Head.	4-4, Mass. Mills, Flying Horse brand.	4-4, Pepperell R.	Average.	
Jan....	108.7	116.8	99.2	106.2	106.3	99.8	94.1	102.2	100.6	108.9
Feb....	106.9	116.8	99.2	107.6	108.1	103.8	96.2	104.4	103.1	105.1
Mar....	107.9	116.8	99.2	108.0	110.5	103.8	98.2	104.4	104.2	105.8
Apr....	107.5	116.8	99.2	107.8	111.0	103.8	98.2	104.4	104.4	106.8
May....	115.0	116.8	99.2	110.3	112.1	103.8	100.3	104.4	105.2	107.4
June....	123.0	122.1	99.2	114.8	115.7	107.8	102.2	106.9	108.7	111.3
July....	123.7	122.1	106.8	117.5	116.1	111.8	102.2	106.9	109.8	113.1
Aug....	122.4	122.1	106.8	117.1	118.6	111.8	102.2	113.4	111.5	112.9
Sept....	^b 122.4	122.1	106.8	117.1	120.3	111.8	106.3	113.4	113.0	114.7
Oct....	126.6	122.1	106.8	118.6	119.5	111.8	106.3	113.4	112.8	115.2
Nov....	115.1	127.4	106.8	116.4	119.8	115.8	106.3	113.4	113.7	114.9
Dec....	^b 115.1	127.4	106.8	116.4	121.7	119.8	110.4	113.4	116.3	116.4
1903....	115.7	120.8	103.0	118.2	115.0	106.8	101.9	108.7	108.6	110.6

Month.	Cloths and clothing.						Silk: raw.		
	Shirtings: bleached.					Average.	Italian, classical.	Japan, flatures.	Average.
	4-4, Fruit of the Loom.	4-4, Hope.	4-4, Lons- dale.	4-4, New York Mills.	4-4, Wam- sutta <O> XX.				
Jan....	101.4	101.7	98.1	92.7	100.2	98.8	102.9	104.7	103.8
Feb....	101.4	103.7	99.7	94.6	100.2	99.9	102.9	105.9	104.4
Mar....	108.0	105.6	99.7	90.2	100.2	99.7	102.9	106.2	104.6
Apr....	108.0	105.6	103.2	92.5	100.2	100.9	102.9	103.8	103.4
May....	104.8	105.6	103.2	95.8	100.2	101.9	104.7	102.6	103.7
June....	104.8	105.6	103.2	91.7	100.2	101.1	106.3	104.7	107.0
July....	104.8	109.4	106.6	96.1	105.2	104.4	109.3	108.8	106.6
Aug....	108.2	109.4	106.6	98.5	105.2	104.6	108.2	108.2	105.7
Sept....	108.2	109.4	106.6	106.5	105.2	107.2	109.9	108.5	106.7
Oct....	108.2	109.4	106.6	101.5	105.2	106.2	110.5	108.8	107.2
Nov....	108.2	109.4	106.6	106.7	105.2	107.2	109.3	99.6	104.5
Dec....	108.2	111.3	106.6	102.3	105.2	106.7	102.6	92.9	97.8
1903....	105.4	107.1	108.9	97.0	102.7	103.2	106.3	102.9	104.6

^a Average for 1897-1899=100.

^b Nominal price; see explanation on page 243.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899 = 100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Cloths and clothing.								
Suits.								Tickings: Amos- keag A. C. A.
Month.	Clay worsted di- agonal, 12- ounce, Wash- ington Mills. ^a	Clay worsted di- agonal, 16- ounce, Wash- ington Mills. ^a	Indigo blue, all wool, 54-inch, 14- ounce, Mid- dixex.	Indigo blue, all wool, 16- ounce.	Serge, Washing- ton Mills, 6,700. (b)	Trouser- ings, fancy worsted. (b)	Aver- age.	
Jan....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	99.0
Feb....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	99.0
Mar....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	99.0
Apr....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	99.0
May....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	99.0
June....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	103.7
July....	117.5	114.0	108.8	112.6	101.6	104.6	109.9	108.4
Aug....	112.0	109.5	108.8	112.6	98.7	104.6	107.7	108.4
Sept....	112.0	109.5	108.8	112.6	98.7	104.6	107.7	108.4
Oct....	112.0	109.5	108.8	112.6	98.7	104.6	107.7	108.4
Nov....	112.0	109.5	108.8	112.6	98.7	104.6	107.7	108.4
Dec....	112.0	109.5	108.8	112.6	98.7	104.6	107.7	108.4
1903....	115.2	112.1	108.8	112.6	100.4	104.6	109.0	104.1

Cloths and clothing.										
Underwear.				Women's dress goods.						
Month.	Shirts and drawers, white, all wool, etc.	Shirts and drawers, white, merino, wool and cotton.	Aver- age.	Alpaca, cotton warp, 22-inch, Hamil- ton.	Cash- mere, all wool, 10-11 twill, 38- inch, At- lantic J.	Cash- mere, cotton warp, 9-twill, 4-4, At- lantic F.	Cash- mere, cotton warp, 22-inch, Hamil- ton.	Cash- mere, cotton warp, 27-inch, Hamil- ton.	Frank- lin sack- ings, 6-4.	Aver- age.
Jan....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
Feb....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
Mar....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
Apr....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
May....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
June....	100.4	95.4	97.9	100.9	111.3	108.0	97.0	99.9	115.3	105.4
July....	100.4	95.4	97.9	100.9	117.2	112.8	97.0	99.9	115.3	107.2
Aug....	100.4	95.4	97.9	100.9	117.2	112.8	97.0	99.9	115.3	107.2
Sept....	100.4	95.4	97.9	100.9	117.2	112.8	97.0	99.9	115.3	107.2
Oct....	100.4	95.4	97.9	100.9	117.2	112.8	100.3	105.4	115.3	108.7
Nov....	100.4	95.4	97.9	104.6	117.2	112.8	100.3	105.4	110.7	108.5
Dec....	100.4	95.4	97.9	104.6	117.2	112.8	100.3	105.4	110.7	108.5
1903....	100.4	95.4	97.9	101.5	111.3	110.5	97.8	101.2	114.5	106.6

Cloths and clothing.							
Month.	Wool.		Average.	Worsted yarns.		Average.	Average, cloths and clothing.
	Ohio, fine fleece (X and XX grade), scoured.	Ohio, med- ium fleece (I and I grade), scoured.		2-40s, Aus- tralian fine.	2-40s, XXXX, white, in skeins.		
Jan.....	115.5	101.4	108.5	117.8	122.1	120.0	104.2
Feb.....	117.4	103.0	110.2	117.8	122.1	120.0	104.5
Mar.....	115.5	101.4	108.5	117.8	122.1	120.0	104.9
Apr.....	113.6	99.7	106.7	117.8	122.1	120.0	105.0
May.....	109.7	96.5	103.1	115.4	122.1	118.8	105.4
June.....	111.7	94.1	104.9	115.4	119.2	117.3	106.3
July.....	121.6	103.0	112.3	115.4	119.2	117.3	107.5
Aug.....	121.6	103.0	112.3	115.4	119.2	117.3	107.8
Sept.....	123.2	103.0	113.1	115.4	119.2	117.3	108.2
Oct.....	123.2	103.0	113.1	112.9	119.2	116.1	108.0
Nov.....	123.2	106.3	114.8	112.9	119.2	116.1	108.1
Dec.....	125.1	106.3	115.7	112.9	119.2	116.1	108.6
1903.....	118.5	102.1	110.3	115.6	120.4	118.0	106.6

^a Average for 1895-1899 - 100.^b Average for 1892-1899 - 100.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Fuel and lighting.										
	Candles: adamantine, 6s, 14-ounce.	Coal.								Average.	
		Anthracite.					Bituminous.				
		Broken.	Chest-nut.	Egg.	Stove.	Average.	Georges Creek (at mine).	Georges Creek (f. o. b. New York Harbor).	Pitts- burg (Yough- iogheny).		Average.
Jan.....	140.7	117.5	137.7	137.7	130.4	130.8	450.1	289.8	155.5	298.5	202.7
Feb.....	140.7	118.8	137.7	137.7	130.4	131.2	506.4	287.0	155.5	299.6	208.4
Mar.....	140.7	118.0	137.7	137.7	130.4	131.0	281.8	158.1	155.5	196.6	159.1
Apr.....	140.7	125.0	128.8	128.9	117.3	122.5	258.2	158.1	140.0	182.1	148.0
May.....	140.7	127.8	126.6	126.6	119.9	125.2	225.0	140.4	140.0	168.5	143.8
June.....	140.7	130.7	129.2	129.4	122.8	127.9	225.0	140.4	140.0	168.5	145.3
July.....	108.7	182.5	182.1	182.3	125.2	180.5	225.0	140.4	140.0	168.5	146.8
Aug.....	115.1	182.9	184.9	185.0	127.8	182.7	225.0	140.4	140.0	168.5	148.0
Sept.....	115.1	181.7	187.7	187.7	130.4	184.4	225.0	140.4	140.0	168.5	149.0
Oct.....	115.1	126.6	137.7	137.7	130.4	183.1	225.0	140.4	140.0	168.5	148.3
Nov.....	115.1	126.2	137.7	137.7	130.5	183.0	196.9	133.1	140.0	156.7	143.2
Dec.....	115.1	127.0	137.7	137.7	130.4	183.2	196.9	183.1	140.0	156.7	143.3
1903.....	127.4	126.2	134.2	134.3	127.1	130.5	269.6	161.8	143.9	191.8	156.7

Month.	Fuel and lighting.							
	Coke: Connellsville, furnace.	Matches: parlor, do- mestic.	Petroleum.					Average fuel and lighting.
			Crude.	Refined.			Average.	
				For export.	150° fire test, w. w.	Average.		
Jan.....	235.5	85.4	167.5	127.9	146.1	137.0	147.2	178.6
Feb.....	235.5	85.4	164.8	126.3	146.1	136.2	145.7	178.6
Mar.....	235.5	85.4	164.8	126.3	146.1	136.2	145.7	154.8
Apr.....	228.2	85.4	165.9	128.7	151.7	140.2	148.8	149.0
May.....	206.1	85.4	166.4	128.7	151.7	140.2	148.9	145.0
June.....	169.3	85.4	164.8	131.7	151.7	141.7	149.4	143.1
July.....	161.9	85.4	167.5	131.7	151.7	141.7	150.8	141.1
Aug.....	182.5	85.4	171.4	131.7	151.7	141.7	151.6	140.3
Sept.....	125.1	85.4	172.8	131.7	151.7	141.7	152.1	140.4
Oct.....	125.1	85.4	185.1	135.6	151.7	143.7	157.5	141.2
Nov.....	110.4	85.4	196.4	143.3	168.5	155.9	169.4	140.1
Dec.....	92.7	85.4	207.0	146.4	168.5	157.5	174.0	139.8
1903.....	171.5	85.4	174.5	132.5	158.1	142.8	158.4	149.3

Month.	Metals and implements.												
	Bar iron: best refined.			Barb wire: galvanized.	Builders' hardware.				Copper.				
	From mill (Pittsburg market).	From store (Philadelphia market).	Average.		Butts: loose joint, cast, 3 x 3 in.	Door-knobs: steel, bronze plated.	Locks: common mortise.	Average.	Ingot, lake.	Sheet, hot-rolled (base sizes).	Wire, bare.	Average.	
Jan.....	137.9	134.1	136.0	106.1	126.6	132.6	110.2	123.1	98.8	108.5	98.1	100.1	
Feb.....	137.9	134.1	136.0	106.9	126.6	132.6	110.2	123.1	102.8	108.5	97.3	102.9	
Mar.....	137.9	134.1	136.0	110.8	126.6	132.6	110.2	123.1	110.5	120.6	108.5	113.2	
Apr.....	137.9	134.1	136.0	109.7	126.6	132.6	110.2	123.1	122.6	120.6	111.9	118.4	
May.....	137.9	131.7	134.8	108.9	126.6	132.6	110.2	123.1	121.6	120.6	110.2	117.5	
June.....	122.1	126.8	124.5	108.9	126.6	132.6	110.2	123.1	120.6	120.6	108.5	116.6	
July.....	117.2	122.6	119.9	108.9	126.6	132.6	110.2	123.1	115.5	120.6	101.6	112.6	
Aug.....	117.2	117.7	117.5	108.9	126.6	132.6	110.2	123.1	106.4	120.6	100.8	109.3	
Sept.....	117.2	110.4	113.8	108.9	126.6	132.6	110.2	123.1	111.9	120.6	100.8	111.1	
Oct.....	117.2	110.4	113.8	108.9	126.6	132.6	110.2	123.1	107.9	108.5	99.0	105.1	
Nov.....	92.4	104.8	98.4	108.9	126.6	132.6	110.2	123.1	112.5	108.5	98.2	105.4	
Dec.....	89.7	104.8	97.0	102.9	126.6	132.6	110.2	123.1	99.3	108.5	97.3	101.7	
1903.....	122.1	122.0	122.1	106.4	126.6	132.6	110.2	123.1	110.9	115.6	102.3	108.6	

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Metals and implements.								
	Lead: pig.	Lead pipe.	Nails.			Pig iron.			
			Cut, 8-penny, fence and com.	Wire, 8-penny, fence and com.	Average.	Bessemer.	Foundry No. 1.	Foundry No. 2.	Gray forge, Southern, coke.
Jan.....	107.9	107.9	117.6	92.5	105.1	165.8	162.1	181.9	189.4
Feb.....	108.4	112.1	120.4	92.5	106.5	159.0	160.4	174.3	182.6
Mar.....	108.4	115.2	120.4	97.1	108.8	158.6	158.7	175.1	182.6
Apr.....	122.6	118.3	123.1	97.1	110.1	154.4	153.3	167.4	173.6
May.....	115.0	112.1	123.1	97.1	110.1	145.2	144.4	162.8	164.6
June.....	115.0	106.9	123.1	97.1	110.1	143.1	139.3	159.0	148.8
July.....	107.9	104.8	123.1	97.1	110.1	137.4	128.3	152.3	145.4
Aug.....	110.2	104.8	123.1	97.1	110.1	133.2	121.6	134.1	130.8
Sept.....	107.9	101.7	123.1	97.1	110.1	125.0	118.2	119.7	126.2
Oct.....	116.8	106.8	123.1	97.1	110.1	116.1	112.8	114.9	111.6
Nov.....	116.8	106.8	112.2	97.1	104.7	110.2	108.1	111.1	99.2
Dec.....	111.5	106.8	109.4	92.5	101.0	104.5	107.1	107.3	98.1
1903.....	112.8	107.8	120.2	96.0	108.1	137.7	134.5	146.6	141.3

Month.	Metals and implements.						
	Quicksilver.	Silver: bar, fine.	Spelter: Western.	Steel billets.	Steel rails.	Steel sheets: black, No. 27. (a)	Tin: pig.
Jan.....	114.4	64.4	104.0	137.5	107.4	118.3	162.5
Feb.....	113.5	64.7	110.6	139.4	107.4	118.3	156.3
Mar.....	113.5	65.9	118.5	142.2	107.4	118.3	167.8
Apr.....	114.4	68.4	126.1	140.3	107.4	118.3	164.8
May.....	115.3	73.1	127.2	140.5	107.4	118.3	163.4
June.....	115.3	71.5	127.2	134.1	107.4	120.5	155.9
July.....	112.6	72.8	136.9	127.3	107.4	120.5	153.5
Aug.....	112.6	74.9	130.1	125.4	107.4	116.1	154.7
Sept.....	112.6	78.2	132.7	125.4	107.4	115.2	147.8
Oct.....	110.9	81.4	132.7	125.4	107.4	115.2	142.6
Nov.....	112.6	78.4	122.8	111.5	107.4	111.6	140.3
Dec.....	112.6	74.8	116.2	106.8	107.4	104.0	141.1
1903.....	113.4	72.4	123.5	129.7	107.4	116.1	153.4

Month.	Metals and implements.							
	Tools.						Saws.	
	Augers: extra, 4-inch.	Axes: M. C. O., Yankee.	Chisels: extra, socket firmer, 1-inch.	Files: 8-inch mill bastard.	Hammers: Maydole No. 14.	Planes: Bailey No. 5.	Crosscut, Disston.	Hand, Disston No. 7.
Jan.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
Feb.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
Mar.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
Apr.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
May.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
June.....	143.7	108.7	147.8	123.1	129.0	115.7	100.0	98.6
July.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
Aug.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
Sept.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
Oct.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
Nov.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
Dec.....	143.7	108.5	147.8	123.1	129.0	115.7	100.0	98.6
1903.....	143.7	107.6	147.8	123.1	129.0	115.7	100.0	98.6

a Average for the period July, 1894, to December, 1899=100.

b Average for 1890-1899=100.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Metals and implements.						
	Tools.				Wood screws: 1-inch, No. 10, flat- head.	Zinc: sheet.	Average, metals and implements.
	Shovels: Ames No. 2.	Trowels: M. C. O., brick, 10 $\frac{1}{2}$ -inch.	Vises: solid box, 50- pound.	Average.			
Jan....	102.0	100.0	117.9	117.0	60.9	108.3	119.4
Feb....	102.0	100.0	117.9	117.0	60.9	108.3	121.6
Mar....	102.0	100.0	117.9	117.0	73.2	108.3	123.1
Apr....	102.0	100.0	147.4	119.6	73.2	116.9	121.9
May....	102.0	100.0	147.4	119.6	73.2	116.9	121.9
June....	102.0	100.0	132.8	118.3	73.2	116.9	119.7
July....	102.0	100.0	132.8	118.1	73.2	116.9	118.1
Aug....	102.0	100.0	147.4	119.4	76.2	116.9	117.0
Sept....	102.0	100.0	147.4	119.4	76.2	116.9	115.8
Oct....	102.0	100.0	132.8	118.1	76.2	116.9	114.3
Nov....	102.0	100.0	132.8	118.1	76.2	116.9	111.8
Dec....	102.0	100.0	117.9	116.8	76.2	99.6	109.0
1903....	102.0	100.0	132.7	118.2	72.4	113.8	117.6

Month.	Lumber and building materials.							
	Brick: common domestic.	Carbonate of lead: American, in oil.	Cement.			Doors: pine.	Lime: common.	Linseed oil: raw.
			Portland, domestic. (^a)	Rowendale.	Average.			
Jan.	103.4	93.4	106.4	104.3	105.4	169.3	97.2	101.4
Feb.	103.4	97.7	103.9	112.7	108.3	169.3	97.2	101.4
Mar.	92.1	97.7	106.4	109.9	108.2	169.3	91.2	101.4
Apr.	92.1	110.4	107.7	95.8	101.8	169.3	91.2	101.4
May	94.4	114.7	106.4	101.5	104.0	169.3	91.2	97.0
June	89.9	114.7	110.2	101.5	105.9	164.7	91.2	97.0
July	92.1	114.7	107.7	98.6	103.2	164.7	91.2	88.2
Aug.	98.9	110.4	100.2	95.8	98.0	155.5	91.2	88.8
Sept.	121.3	110.4	100.2	95.8	98.0	155.5	98.4	81.6
Oct.	125.8	106.2	87.7	95.8	91.8	141.8	98.4	86.0
Nov.	130.3	106.2	98.9	95.8	94.9	141.8	98.4	81.6
Dec.	130.3	101.9	88.9	95.8	92.4	128.1	97.2	81.6
1903.	106.2	106.6	101.6	100.3	101.0	158.2	94.6	91.9

Month.	Lumber and building materials.								
	Lumber.								
	Hem- lock.	Maple: hard.	Oak: white.			Pine.			
			Plain.	Quar- tered.	Aver- age.	White, boards.		Yellow.	Average.
						No. 2 barn.	Uppers.	Aver- age.	
Jan....	137.9	105.6	113.5	130.4	122.0	140.3	171.8	156.1	113.7
Feb....	137.9	105.6	113.5	130.4	122.0	140.3	171.8	156.1	113.7
Mar....	137.9	117.0	113.5	130.4	122.0	140.3	171.8	156.1	113.7
Apr....	137.9	117.0	113.5	130.4	122.0	140.3	171.8	156.1	113.7
May....	137.9	117.0	113.5	130.4	122.0	140.3	171.8	156.1	113.7
June....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
July....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
Aug....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
Sept....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
Oct....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
Nov....	142.1	124.5	124.2	144.4	134.3	140.3	171.8	156.1	113.7
Dec....	142.1	124.5	124.2	153.7	139.0	140.3	171.8	156.1	113.7
1903....	140.4	119.5	119.8	139.8	129.6	140.3	171.8	156.1	113.7

^a Average for 1895-1899=100.

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Lumber and building materials.							
	Lumber.			Oxide of zinc.	Plate glass: polished, unaltered.			Resin: good, strained.
	Poplar.	Spruce.	Average.		Area, 3 to 5 square feet.	Area, 5 to 10 square feet.	Average.	
Jan.....	143.5	127.2	131.5	115.8	74.4	85.7	80.1	133.7
Feb.....	146.7	127.2	131.9	115.8	74.4	85.7	80.1	145.8
Mar.....	151.4	127.2	133.7	115.8	74.4	85.7	80.1	158.0
Apr.....	151.4	127.2	133.7	115.8	74.4	85.7	80.1	159.7
May.....	151.4	127.2	133.7	115.8	74.4	85.7	80.1	147.6
June.....	165.0	132.4	139.8	115.8	74.4	85.7	80.1	144.1
July.....	165.0	132.4	139.8	115.8	74.4	85.7	80.1	143.2
Aug.....	165.0	132.4	139.8	115.8	74.4	85.7	80.1	137.2
Sept.....	165.0	142.9	141.0	115.8	74.4	85.7	80.1	145.8
Oct.....	165.0	142.9	141.0	115.8	66.1	75.1	70.6	159.7
Nov.....	165.0	142.9	141.0	115.8	66.1	75.1	70.6	192.7
Dec.....	165.0	142.9	142.0	115.8	66.1	75.1	70.6	178.8
1903.....	158.3	133.7	137.4	115.8	72.3	83.1	77.7	153.9

Month.	Lumber and building materials.							
	Shingles.			Tar.	Turpen- tine: spirits of.	Window glass: American, single.		
	Cypress.	White pine.	Average.			First, 6 x 8 to 10 x 15 inch.	Third, 6 x 8 to 10 x 15 inch.	Average, lumber and building mate- rials.
Jan.....	88.6	125.1	106.9	132.8	168.0	119.6	115.8	120.7
Feb.....	88.6	125.1	106.9	132.8	195.9	119.6	115.8	122.8
Mar.....	88.6	125.1	106.9	137.0	196.7	119.6	115.8	123.8
Apr.....	88.6	125.1	106.9	137.0	201.2	119.6	115.8	120.9
May.....	92.2	125.1	108.7	137.0	143.6	119.6	115.8	118.7
June.....	92.2	125.1	108.7	137.0	146.6	119.6	115.8	120.6
July.....	92.2	125.1	108.7	137.0	148.1	119.6	115.8	120.1
Aug.....	92.2	125.1	108.7	137.0	157.0	119.6	115.8	117.7
Sept.....	92.2	125.1	108.7	137.0	164.5	119.6	115.8	121.5
Oct.....	92.2	125.1	108.7	149.4	175.0	119.6	115.8	121.3
Nov.....	92.2	125.1	108.7	149.4	179.5	138.0	133.6	124.3
Dec.....	92.2	125.1	108.7	149.4	177.2	138.0	133.6	123.1
1903.....	91.0	125.1	108.1	139.4	171.0	122.7	118.7	121.4

Month.	Drugs and chemicals.									
	Alcohol: grain, 94 per cent.	Alcohol: wood, re- fined, 96 per cent.	Alum: lump.	Brim- stone: crude, seconds.	Glycer- in: re- fined.	Muric acid: 20%.	Opium: natural, in cases.	Quinine: Ameri- can.	Sul- phuric acid: 66%.	Average, drugs and chemi- cals.
Jan.....	104.5	68.1	104.8	111.1	103.6	153.8	115.5	105.7	134.8	111.8
Feb.....	107.6	68.1	104.8	108.7	103.6	153.8	115.5	105.7	134.8	111.4
Mar.....	107.6	68.1	104.8	109.9	103.6	153.8	127.1	113.8	134.8	113.7
Apr.....	106.7	68.1	98.8	106.3	103.6	153.8	125.0	105.7	134.8	111.4
May.....	106.2	68.1	98.8	107.5	103.6	153.8	125.0	105.7	146.1	112.8
June.....	106.2	68.1	104.8	107.5	103.6	153.8	135.6	97.6	146.1	113.7
July.....	105.8	68.1	104.8	107.5	103.6	153.8	134.5	93.5	146.1	113.1
Aug.....	105.8	67.7	104.8	107.5	103.6	153.8	148.3	97.6	146.1	113.9
Sept.....	105.8	62.4	104.8	107.5	103.6	153.8	139.8	101.6	146.1	112.8
Oct.....	105.8	62.4	104.8	107.5	103.6	153.8	137.7	101.6	146.1	112.6
Nov.....	104.5	62.4	104.8	107.5	101.9	153.8	135.6	101.6	146.1	112.5
Dec.....	104.9	62.4	104.8	106.3	101.9	153.8	127.1	101.6	146.1	111.4
1903.....	106.9	62.0	103.6	107.9	103.4	153.8	130.6	102.6	142.7	112.6

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	House furnishing goods.							
	Earthenware.				Furniture.			
	Plates, cream-colored.	Plates, white granite.	Teacups and saucers, white granite.	Average.	Bedroom sets, ash.	Chairs, bedroom, maple.	Chairs, kitchen.	Tables, kitchen.
Jan....	115.4	111.4	107.4	111.4	111.3	121.1	130.7	108.1
Feb....	115.4	111.4	107.4	111.4	111.3	121.1	130.7	108.1
Mar....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Apr....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
May....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
June....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
July....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Aug....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Sept....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Oct....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Nov....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
Dec....	115.4	111.4	107.4	111.4	116.1	129.1	130.7	108.1
1903....	115.4	111.4	107.4	111.4	115.3	127.8	130.7	108.1

Month.	House furnishing goods.							
	Glassware.				Table cutlery.			Average, house-furnishing goods.
	Nap-pies, 4-inch.	Pitch-ers, 1-gallon, common.	Tum-blers, 1-pint, common.	Average.	Carvers, stag handles.	Knives and forks, cocobolo handles.	Average.	
Jan....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
Feb....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
Mar....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
Apr....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
May....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
June....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
July....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
Aug....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3
Sept....	125.0	110.6	96.8	110.5	93.8	107.3	100.6	119.3
Oct....	125.0	110.6	96.8	110.5	93.8	107.3	100.6	119.3
Nov....	125.0	110.6	95.8	110.5	93.8	107.3	100.6	119.3
Dec....	125.0	110.6	95.8	110.5	93.8	107.3	100.6	119.3
1903....	125.0	110.6	99.5	111.7	93.8	107.3	100.6	114.9

Month.	Miscellaneous.							
	Cotton-seed meal.	Cotton-seed oil: summer yellow, prime.	Jute: raw.	Malt: West-ern made.	Paper.			Proof spirits.
					News.	Wrapping, manila.	Average.	
Jan....	125.2	128.1	111.4	104.6	88.0	88.2	88.1	113.3
Feb....	125.2	130.6	135.9	104.6	88.0	84.9	91.6	113.1
Mar....	124.1	134.7	135.9	104.6	88.0	84.9	91.5	113.1
Apr....	124.1	133.0	135.9	104.6	88.6	86.0	89.8	113.1
May....	120.7	142.9	135.9	104.6	88.6	86.0	89.8	113.1
June....	118.4	139.6	135.9	101.7	88.6	86.0	89.8	113.1
July....	118.4	136.3	135.9	101.7	88.6	86.0	89.8	113.1
Aug....	120.7	138.0	135.9	101.7	88.6	86.0	89.8	113.1
Sept....	122.9	134.7	129.0	104.6	88.6	86.0	89.8	107.0
Oct....	120.7	131.4	129.0	102.4	88.6	86.0	89.8	108.3
Nov....	119.5	108.4	115.0	101.7	88.6	86.0	89.8	108.7
Dec....	119.5	110.1	115.0	100.3	88.6	86.0	89.8	108.7
1903....	121.6	130.7	129.2	108.1	84.6	86.1	89.9	111.4

TABLE III.—RELATIVE PRICES OF COMMODITIES IN 1903—Concluded.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I. Relative price for 1903 computed from average price for the year as shown in Table I.]

Month.	Miscellaneous.						
	Rope: manila.	Rubber: Para Island.	Soap: castile, mottled, pure.	Starch: laundry.	Plug, Horseshoe.	Tobacco. Smoking, granulated, Seal of N. C.	Average, miscellaneous.
Jan....	120.4	108.0	116.5	143.7	113.6	112.0	112.8
Feb....	115.1	104.3	116.5	122.1	113.6	112.0	112.8
Mar....	121.8	111.8	116.5	122.1	113.6	112.0	112.8
Apr....	120.4	109.3	116.5	122.1	113.6	112.0	112.8
May....	123.1	111.8	116.5	122.1	113.6	112.0	112.8
June....	125.8	107.4	116.5	122.1	113.6	112.0	112.8
July....	125.8	110.5	116.5	122.1	113.6	112.0	112.8
Aug....	123.1	113.0	116.5	122.1	113.6	112.0	112.8
Sept....	124.5	120.5	116.5	122.1	113.6	112.0	112.8
Oct....	125.8	126.8	116.5	122.1	113.6	112.0	112.8
Nov....	123.1	119.3	112.1	122.1	113.6	112.0	112.8
Dec....	123.1	114.3	112.1	122.1	113.6	112.0	112.8
1903....	122.7	113.1	115.6	123.9	113.6	112.0	112.8

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903.

[For a more detailed description of the articles see Table I.]

Year.	Farm products.									
	Barley: by sample.		Cattle: steers, choice to extra.		Cattle: steers, good to choice.		Corn: No. 2, cash.		Cotton: upland, middling.	
	Average price per bushel.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per bushel.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899.	\$0.4534	100.0	\$5.3203	100.0	\$4.7347	100.0	\$0.3804	100.0	\$0.07762	100.0
1890	.5062	111.6	4.8697	91.5	4.1375	87.4	.3950	103.8	.11089	142.9
1891	.6098	134.5	5.8851	110.6	5.0976	107.7	.5744	151.0	.08603	110.8
1892	.5085	112.2	5.0909	95.7	4.4995	95.0	.4500	118.3	.07686	99.0
1893	.4685	103.3	5.5211	103.8	4.8394	102.2	.3964	104.2	.08319	107.2
1894	.5134	113.2	5.1591	97.0	4.5245	95.6	.4326	113.7	.07002	90.2
1895	.4300	94.8	5.4849	103.1	4.9344	104.2	.3955	104.0	.07298	94.0
1896	.2977	65.7	4.5957	86.4	4.2712	90.2	.2580	67.8	.07918	102.0
1897	.3226	71.2	5.2255	98.2	4.7736	100.8	.2546	66.9	.07158	92.2
1898	.4948	95.9	5.3779	101.1	4.8846	103.2	.3144	82.6	.05972	76.9
1899	.4425	97.6	5.9928	112.6	5.3851	113.7	.3333	87.6	.06578	84.7
1900	.4815	106.2	5.7827	108.7	5.3938	113.9	.3811	100.2	.09609	123.8
1901	.5884	129.8	6.1217	115.1	5.5901	118.1	.4969	130.6	.06627	111.1
1902	.6321	139.4	7.4721	140.4	6.5572	138.5	.5968	156.9	.08932	115.1
1903	.5494	121.2	5.6678	104.7	5.0615	106.9	.4606	121.1	.11235	144.7

Year.	Farm products.									
	Flaxseed: No. 1.		Hay: timothy, No. 1.		Hides: green, salted, packers, heavy native steers.		Hogs: heavy.		Hogs: light.	
	Average price per bushel.	Relative price.	Average price per ton.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.
Average, 1890-1899.	\$1.1132	100.0	\$10.4304	100.0	\$0.0937	100.0	\$4.4123	100.0	\$4.4206	100.0
1890	1.3667	122.5	9.9952	95.8	.0933	99.6	3.9534	89.6	3.9260	88.8
1891	1.0845	97.1	12.2861	117.8	.0951	101.5	4.4229	100.2	4.3404	98.2
1892	1.0179	91.4	11.8375	113.5	.0870	92.8	5.1550	116.8	5.0675	114.6
1893	1.0875	97.7	11.2067	107.4	.0749	79.9	6.5486	148.4	6.5752	148.7
1894	1.3533	121.6	10.4183	99.9	.0641	68.4	4.9719	112.7	4.9327	111.6
1895	1.2449	111.8	11.3844	109.1	.1028	109.7	4.2781	97.0	4.2583	96.2
1896	.8119	72.9	10.3269	99.0	.0811	86.3	3.3579	76.1	3.5591	80.5
1897	.8696	78.1	8.4423	80.9	.0996	106.6	3.5006	81.4	3.7223	84.2
1898	1.1115	99.8	8.3317	79.9	.1151	122.8	3.8053	86.2	3.7587	85.0
1899	1.1578	104.0	10.0745	96.6	.1235	131.8	4.0394	91.5	4.0709	92.1
1900	1.6223	145.7	11.5673	110.9	.1194	127.4	5.0815	115.2	5.1135	115.7
1901	1.6227	145.8	12.8256	123.0	.1237	132.0	5.9580	135.0	6.9177	155.9
1902	1.5027	135.0	12.6154	120.9	.1328	142.8	6.9704	158.0	6.7853	152.4
1903	1.0471	94.1	12.4279	119.2	.1169	124.8	6.0572	137.3	6.0641	137.0

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Food, etc.									
	Fruit: raisins, California, Lon- don layer.		Glucose: 41° and 42° mixing.		Lard: prime contract.		Meal: corn, fine white.		Meal: corn, fine yellow.	
	Average price per box.	Rela- tive price.	Average price per 100 lbs.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per 100 lbs.	Rela- tive price.	Average price per 100 lbs.	Rela- tive price.
Average, 1890-1899.	\$1.5006	100.0	\$1.4182	100.0	\$0.0654	100.0	\$1.0486	100.0	\$1.0169	100.0
1890	2.3604	157.3			.0633	96.8	1.0613	101.2	1.0200	100.3
1891	1.8021	120.1			.0660	100.9	1.4746	140.6	1.4579	143.4
1892	1.4688	97.9			.0771	117.9	1.1921	113.7	1.1608	114.2
1893	1.7000	113.3	1.7625	124.3	.1080	157.5	1.1013	105.0	1.0833	106.5
1894	1.1542	76.9	1.5802	111.4	.0773	118.2	1.1188	108.7	1.0629	104.5
1895	1.4292	95.2	1.5492	109.2	.0653	99.8	1.0721	102.2	1.0613	104.4
1896	1.0188	67.9	1.1585	81.7	.0469	71.7	.8129	77.5	.7854	77.2
1897	1.3979	93.2	1.2190	86.0	.0141	67.4	.8158	77.8	.7633	75.1
1898	1.3917	92.7	1.3021	91.8	.0562	84.4	.8821	84.1	.8463	83.2
1899	1.2833	85.5	1.3568	95.6	.0556	85.0	.9654	91.1	.9273	91.2
1900	1.5208	101.3	1.4875	104.9	.0690	105.5	1.0115	96.5	.9908	97.4
1901	1.4417	96.1	1.6458	116.0	.0885	135.3	1.1979	114.2	1.1875	116.8
1902	1.6854	112.3	2.1788	153.6	.1059	161.9	1.5354	146.4	1.6250	150.0
1903	1.4458	96.3	1.8396	129.7	.0877	134.1	1.2967	123.7	1.2783	125.7

Year.	Food, etc.									
	Meat: bacon, short clear sides.		Meat: bacon, short rib sides.		Meat: beef, fresh, native sides.		Meat: beef, salt, extra mess.		Meat: beef, salt, hams, Western.	
	Average price per pound.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per barrel.	Rela- tive price.	Average price per barrel.	Rela- tive price.
Average, 1890-1899.	\$0.0675	100.0	\$0.0656	100.0	\$0.0771	100.0	\$8.0166	100.0	\$18.0912	100.0
1890	.0603	89.3	.0596	89.3	.0688	89.2	6.9596	86.8	14.5409	80.4
1891	.0699	103.6	.0681	103.8	.0819	106.2	8.3654	104.4	15.5144	85.8
1892	.0787	116.6	.0764	116.5	.0762	98.8	6.7966	84.8	14.5577	80.5
1893	.1048	155.3	.1010	154.0	.0813	105.4	8.1938	102.2	17.8317	98.6
1894	.0751	111.3	.0736	112.2	.0748	97.0	8.0933	101.0	18.8558	101.5
1895	.0650	96.3	.0632	96.3	.0792	102.7	8.1274	101.4	17.3443	96.9
1896	.0494	73.2	.0479	73.0	.0698	90.5	7.5096	93.7	15.9327	88.1
1897	.0541	80.1	.0522	79.6	.0769	99.7	7.6755	95.7	22.6250	126.1
1898	.0596	88.3	.0594	90.5	.0781	101.3	9.1563	114.2	21.4980	118.8
1899	.0583	86.4	.0558	85.1	.0835	108.3	9.2885	115.9	22.7212	125.6
1900	.0752	111.4	.0732	111.6	.0804	104.3	9.7538	121.7	20.6587	114.2
1901	.0891	132.0	.0869	132.5	.0787	102.1	9.3204	116.3	20.3774	112.6
1902	.1073	159.0	.1046	159.5	.0971	125.9	11.7885	147.1	21.8413	118.0
1903	.0859	142.1	.0838	143.0	.0784	101.7	9.0673	113.1	21.2115	117.2

Year.	Food, etc.									
	Meat: hams, smoked.		Meat: mutton, dressed.		Meat: pork, salt, mess.		Milk: fresh.		Molasses: N. O., open kettle.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per quart.	Relative price.	Average price per gallon.	Relative price.
Average, 1890-1899.	\$0.0984	100.0	\$0.0754	100.0	\$11.6332	100.0	\$0.0255	100.0	\$0.3151	100.0
1890	.0995	101.1	.0933	123.7	12.1502	104.4	.0253	103.1	.3542	112.4
1891	.0862	99.8	.0860	114.9	11.3029	97.2	.0267	104.7	.2788	88.5
1892	.1076	109.3	.0914	121.2	11.5252	99.1	.0268	105.1	.3188	101.2
1893	.1249	126.9	.0903	106.5	18.3899	157.6	.0279	109.4	.3546	106.2
1894	.1019	103.6	.0605	80.2	14.1262	121.4	.0263	103.1	.3092	98.1
1895	.0947	96.2	.0620	82.2	11.8255	101.7	.0253	99.2	.3063	97.8
1896	.0943	95.8	.0625	82.9	8.9399	76.8	.0234	91.8	.3246	103.0
1897	.0894	90.9	.0728	96.6	8.9087	76.6	.0235	92.2	.2617	83.1
1898	.0907	92.0	.0739	98.0	9.8678	84.8	.0239	93.7	.3063	97.8
1899	.0923	93.8	.0711	94.3	9.3462	80.3	.0253	99.2	.3525	111.9
1900	.1025	104.2	.0727	96.4	12.5072	107.5	.0274	107.5	.4775	151.5
1901	.1075	109.2	.0677	89.5	15.6108	134.2	.0282	102.7	.3783	120.1
1902	.1211	123.1	.0738	97.9	17.9899	154.2	.0288	112.9	.3638	115.6
1903	.1271	129.2	.0744	98.7	16.6514	143.1	.0288	112.9	.3546	112.5

* Average for 1893-1899.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Food, etc.									
	Rice: domestic, choice.		Salt: American.		Salt: Ashton's.		Soda: bicarbonate of, American.		Spices: nutmegs.	
	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per bushel.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	\$0.0661	100.0	\$0.7044	100.0	\$2.2033	100.0	\$0.0209	100.0	\$0.4322	100.0
1890	.0605	107.8	.7921	112.5	2.4646	111.9	.0275	131.6	.6317	146.2
1891	.0637	113.5	.7865	111.7	2.3813	108.1	.0317	151.7	.6081	140.7
1892	.0569	101.4	.7575	107.5	2.3750	107.8	.0218	104.3	.6319	123.1
1893	.0459	81.8	.7019	99.6	2.3250	105.5	.0285	136.4	.4584	106.1
1894	.0628	95.8	.7019	99.6	2.2375	101.6	.0268	128.2	.3996	92.5
1895	.0533	85.0	.7019	99.6	2.0500	93.0	.0177	84.7	.3969	91.8
1896	.0519	92.5	.6226	88.4	2.0500	93.0	.0152	72.7	.3590	83.1
1897	.0542	96.6	.6613	93.9	2.0500	93.0	.0150	71.8	.3354	77.6
1898	.0608	108.4	.6648	94.4	2.0500	93.0	.0129	61.7	.3140	72.7
1899	.0607	108.2	.6805	96.4	2.0500	93.0	.0117	56.0	.2871	66.4
1900	.0548	87.7	1.0010	142.1	2.0500	93.0	.0123	58.9	.2601	60.2
1901	.0548	87.7	.8567	121.6	2.1813	99.0	.0107	51.2	.2346	54.3
1902	.0559	99.6	.6360	90.3	2.2250	101.0	.0108	51.7	.2028	46.9
1903	.0566	100.9	.6140	87.2	2.2479	102.0	.0129	61.7	.2877	66.6

Year.	Food, etc.									
	Spices: pepper, Singapore.		Starch: pure corn.		Sugar: 89° fair refining.		Sugar: 96° centrifugal.		Sugar: granulated.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	\$0.0749	100.0	\$0.0648	100.0	\$0.03398	100.0	\$0.03869	100.0	\$0.04727	100.0
1890	.1151	153.7	.0546	99.6	.01890	143.9	.05460	141.1	.06168	130.5
1891	.0873	116.6	.0600	109.5	.03459	101.8	.03910	101.1	.04714	99.7
1892	.0689	92.0	.0600	109.5	.02873	84.5	.03315	85.7	.04364	92.1
1893	.0595	79.4	.0600	109.5	.03203	94.3	.03680	95.1	.04836	102.3
1894	.0516	68.9	.0667	103.5	.02759	81.2	.03229	83.5	.04111	87.0
1895	.0497	66.4	.0654	101.1	.02894	85.2	.03253	84.1	.04155	87.9
1896	.0300	66.8	.0613	93.6	.03192	93.9	.03624	93.7	.04532	96.9
1897	.0664	88.7	.0500	91.2	.03077	90.6	.03564	92.1	.04497	95.1
1898	.0891	119.0	.0500	91.2	.03712	109.2	.04235	109.5	.04974	105.2
1899	.1117	149.1	.0500	91.2	.03922	115.4	.04422	114.3	.04924	104.2
1900	.1291	172.4	.0500	91.2	.04051	119.2	.04572	118.2	.05332	112.8
1901	.1292	172.5	.0470	85.8	.03521	103.6	.04040	104.4	.05048	106.8
1902	.1255	167.6	.0440	80.3	.03035	89.3	.03542	91.5	.04455	94.2
1903	.1280	172.1	.0607	92.5	.03228	95.0	.03720	96.1	.04641	98.2

Year.	Food, etc.									
	Tallow.		Tea: Formosa, fine.		Vegetables, fresh: onions.		Vegetables, fresh: potatoes, Burbank.		Vinegar: cider, Monarch.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per bushel.	Relative price.	Average price per gallon.	Relative price.
Average, 1890-1899	\$0.0435	100.0	\$0.2839	100.0	\$3.3995	100.0	\$0.4991	100.0	\$0.1478	100.0
1890	.0460	105.7	.2733	96.3	4.3438	127.8	.5956	119.3	.1558	105.4
1891	.0483	111.0	.2817	99.2	4.1250	121.3	.7790	154.9	.1800	121.8
1892	.0463	106.4	.3008	106.0	3.6042	106.0	.4546	91.1	.1642	111.1
1893	.0644	125.1	.2888	101.7	3.1875	93.8	.6714	134.5	.1500	101.6
1894	.0480	110.3	.2783	98.0	3.2500	95.6	.6128	122.8	.1500	101.5
1895	.0434	99.8	.2700	95.1	3.1146	91.6	.4326	86.7	.1450	98.1
1896	.0343	78.9	.2583	91.0	1.9479	57.3	.1965	39.4	.1300	88.0
1897	.0832	76.3	.2800	98.6	3.9271	115.5	.3279	65.7	.1300	88.0
1898	.0856	81.8	.2958	104.2	3.2708	96.2	.5094	102.1	.1325	89.6
1899	.0453	104.1	.3117	109.8	3.2238	94.8	.4172	83.6	.1400	94.7
1900	.0485	111.5	.2977	104.9	2.4271	71.4	.3736	74.9	.1350	91.3
1901	.0618	119.1	.2850	100.4	3.5000	103.0	.5642	113.0	.1325	89.6
1902	.0629	144.6	.3015	106.2	3.6458	107.2	.5968	119.4	.1408	95.3
1903	.0610	117.2	.2296	80.9	3.5675	104.9	.5249	105.2	.1300	88.0

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.									
	Bags: 2-bushel, Amoskeag.		Blankets: 11-4, 5 pounds to the pair, all wool.		Blankets: 11-4, 5 pounds to the pair, cotton warp, all wool filling.		Blankets: 11-4, 5 pounds to the pair, cotton and wool filling.		Boots and shoes: men's brogans, split.	
	Average price per bag.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pair.	Relative price.
Average, 1890-1899.	\$0.1399	100.0	\$0.840	100.0	\$0.613	100.0	\$0.424	100.0	\$0.9894	100.0
1890	.1594	113.9	.910	108.3	.650	106.0	.460	108.5	1.0500	106.1
1891	.1563	111.7	.890	106.0	.650	106.0	.460	108.5	1.0500	106.1
1892	.1550	110.8	.900	107.1	.640	104.4	.430	101.4	1.0375	104.9
1893	.1494	106.8	.900	107.1	.640	104.4	.420	99.1	1.0125	102.3
1894	.1275	91.1	.850	101.2	.550	89.7	.410	96.7	.9688	97.9
1895	.1150	82.2	.750	89.3	.540	88.1	.400	94.3	.9813	99.2
1896	.1281	91.6	.750	89.3	.580	91.4	.400	94.3	.9938	100.4
1897	.1300	92.9	.750	89.3	.650	106.0	.420	99.1	.9500	96.0
1898	.1338	95.6	.900	107.1	.625	102.0	.420	99.1	.9125	92.2
1899	.1446	103.4	.900	95.2	.625	102.0	.420	99.1	.9375	94.8
1900	.1575	112.6	.900	107.1	.750	122.3	.525	123.8	.9375	94.8
1901	.1413	101.0	.850	101.2	.650	106.0	.475	112.0	.9438	95.4
1902	.1433	102.4	.850	101.2	.650	106.0	.475	112.0	.9813	94.1
1903	.1458	104.2	.925	110.1	.700	114.2	.500	117.9	.9250	93.5

Year.	Cloths and clothing.									
	Boots and shoes: men's calf bal. shoes, Goodyear welt.		Boots and shoes: men's split boots.		Boots and shoes: men's vict kid shoes, Goodyear welt.		Boots and shoes: women's solid grain shoes.		Broadcloths: first quality, black, 54-inch, XXX wool.	
	Average price per pair.	Relative price.	Average price per 12 pairs.	Relative price.	Average price per pair.	Relative price.	Average price per pair.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899.	\$2.376	100.0	\$16.850	100.0	\$2.30	100.0	\$0.8175	100.0	\$1.732	100.0
1890	2.400	101.0	17.000	104.0	2.50	108.7	.8500	104.0	1.970	113.7
1891	2.400	101.0	17.000	104.0	2.50	108.7	.8000	97.9	1.970	113.7
1892	2.400	101.0	17.000	104.0	2.50	108.7	.7750	94.8	1.970	113.7
1893	2.400	101.0	16.500	100.9	2.50	108.7	.7500	91.7	1.970	113.7
1894	2.400	101.0	16.000	97.9	2.50	108.7	.7500	91.7	1.580	91.2
1895	2.400	101.0	15.000	91.7	2.25	97.8	.8500	104.0	1.380	79.7
1896	2.400	101.0	15.500	94.8	2.25	97.8	.8500	104.0	1.380	79.7
1897	2.400	101.0	16.000	97.9	2.00	87.0	.8500	104.0	1.700	98.2
1898	2.320	97.6	16.500	100.9	2.00	87.0	.8500	104.0	1.700	98.2
1899	2.240	94.3	17.000	104.0	2.00	87.0	.8500	104.0	1.700	98.2
1900	2.240	94.3	18.000	110.1	2.00	87.0	.9042	110.6	1.870	108.0
1901	2.300	96.8	18.875	112.4	2.00	87.0	.8542	104.5	1.910	110.3
1902	2.300	96.8	18.167	111.1	2.00	87.0	.8625	105.5	1.910	110.3
1903	2.350	98.9	18.500	113.1	2.00	87.0	.8875	108.6	1.910	110.3

Year.	Cloths and clothing.									
	Calico: Cochecho prints.		Carpets: Brussels, 5-frame, Bigelow.		Carpets: Ingrain, 5-frame, Lowell.		Carpets: Wilton, 5-frame, Bigelow.		Cotton flannels: 21 yards to the pound.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899.	\$0.0553	100.0	\$1.0008	100.0	\$0.4752	100.0	\$1.8432	100.0	\$0.0706	100.0
1890	.0650	117.5	1.0820	108.1	.5160	108.6	1.9200	104.2	.0875	123.9
1891	.0675	104.0	1.1280	112.7	.5520	116.2	2.0160	109.4	.0875	123.9
1892	.0650	117.5	1.0820	108.1	.5040	106.1	1.9200	104.2	.0838	118.7
1893	.0625	113.0	.9640	96.3	.5280	111.1	1.9200	104.2	.0725	102.7
1894	.0550	99.5	.9800	98.5	.4680	98.5	1.9200	104.2	.0675	95.6
1895	.0525	94.9	.9800	98.5	.4200	88.4	1.6800	91.1	.0650	92.1
1896	.0525	94.9	.9800	98.5	.4080	85.9	1.6800	91.1	.0650	92.1
1897	.0500	90.4	.9800	98.5	.4320	90.9	1.7280	93.8	.0575	81.4
1898	.0450	81.4	1.0820	108.1	.4680	98.5	1.8240	99.0	.0575	81.4
1899	.0488	87.3	1.0820	108.1	.4560	96.0	1.8240	99.0	.0619	87.7
1900	.0525	94.9	1.0820	108.1	.4920	103.5	1.8720	101.6	.0738	104.5
1901	.0500	90.4	1.0820	108.1	.4800	101.0	1.8720	101.6	.0640	90.7
1902	.0500	90.4	1.0800	108.5	.4840	101.9	1.8840	102.2	.0650	92.1
1903	.0504	91.1	1.0800	108.7	.5136	108.1	2.0080	108.9	.0738	104.1

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.									
	Cotton flannels: 34 yards to the pound.		Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.		Cotton yarns: carded, white, mule-spun, Northern, cones, 101.		Cotton yarns: carded, white, mule-spun, Northern, cones, 221.		Denims: Amos-keag.	
	Average price per yard.	Relative price.	Average price per spool. ^(a)	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899...	\$0.0575	100.0	\$0.031008	100.0	\$0.1608	100.0	\$0.1969	100.0	\$0.1044	100.0
1890	.0688	119.7	.031514	101.6	b. 1790	111.3	b. 2208	112.1	.1175	112.5
1891	.0688	119.7	.031238	100.7	b. 1794	111.6	b. 2244	114.0	.1144	109.6
1892	.0650	113.0	.031238	100.7	b. 1885	117.2	b. 2300	116.8	.1144	109.6
1893	.0675	100.0	.031238	100.7	.1808	112.4	.2138	108.6	.1175	112.5
1894	.0650	95.7	.031238	100.7	.1523	94.7	.1796	91.2	.1100	105.4
1895	.0625	91.3	.031238	100.7	.1477	91.9	.1815	92.2	.0988	94.6
1896	.0650	95.7	.030671	99.6	.1483	92.2	.1844	93.7	.0988	94.6
1897	.0650	95.7	.030503	98.4	.1452	90.3	.1788	90.8	.0981	93.2
1898	.0463	80.5	.030503	98.4	.1456	90.5	.1792	91.0	.0897	85.9
1899	.0508	88.3	.030503	98.4	.1408	87.6	.1760	89.4	.0896	85.8
1900	.0667	98.6	.037240	120.1	.1850	115.0	.2283	115.9	.1073	102.8
1901	.0675	100.0	.037240	120.1	.1585	98.6	.1927	97.9	.1046	100.2
1902	.0675	100.0	.037240	120.1	.1538	95.6	.1819	92.4	.1050	100.6
1903	.0629	109.4	.037240	120.1	.1869	116.2	.2156	109.6	.1127	108.0

Cloths and clothing.

Year.	Drillings: brown, Peppercell.		Drillings: 30-inch, Stark A.		Flannels: white, 4-4, Ballard Vale No. 3.		Ginghams: Amoskeag.		Ginghams: Lancaster.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899...	\$0.0572	100.0	\$0.0521	100.0	\$0.3768	100.0	\$0.0533	100.0	\$0.0573	100.0
1890	.0683	119.4	.0640	122.8	.4400	116.8	.0825	117.3	.0692	120.8
1891	.0652	114.0	.0600	115.2	.4400	116.8	.0850	122.0	.0700	122.2
1892	.0582	101.7	.0535	102.7	.4367	115.9	.0850	122.0	.0700	122.2
1893	.0590	103.1	.0563	108.1	.4125	109.5	.0831	118.4	.0688	111.3
1894	.0559	97.7	.0502	96.4	.3546	94.1	.0485	91.0	.0504	88.0
1895	.0529	92.5	.0489	93.9	.3090	81.7	.0466	87.4	.0496	86.6
1896	.0573	100.2	.0522	100.2	.3217	85.4	.0472	88.6	.0500	87.3
1897	.0525	91.8	.0463	88.9	.3113	82.6	.0438	82.2	.0494	86.2
1898	.0513	89.7	.0437	83.9	.3085	81.8	.0431	80.9	.0488	85.2
1899	.0510	89.2	.0457	87.7	.3750	99.6	.0477	89.6	.0515	89.9
1900	.0606	105.9	.0542	104.0	.4096	108.7	.0515	96.6	.0560	96.0
1901	.0585	102.3	.0532	102.1	.3900	100.8	.0490	91.9	.0581	92.7
1902	.0575	100.5	.0539	103.5	.3986	105.8	.0523	98.1	.0575	100.3
1903	.0619	108.2	.0581	111.5	.4306	114.3	.0550	103.2	.0675	100.3

Cloths and clothing.

Year.	Horse blankets: 6 pounds each, all wool.		Hosiery: men's cotton half hose, 20 to 22 oz.		Hosiery: men's cotton half hose, 84 needles.		Hosiery: women's combed Egyptian cotton.		Hosiery: women's cotton hose, 26 to 28 oz.	
	Average price per pound.	Relative price.	Average price per 12 pairs. ^(c)	Relative price.	Average price per 12 pairs.	Relative price.	Average price per 12 pairs.	Relative price.	Average price per 12 pairs. ^(c)	Relative price.
Average, 1890-1899...	\$0.573	100.0	\$0.9555	100.0	\$0.7845	100.0	\$1.850	100.0	\$0.9310	100.0
1890	.625	109.1	1.2740	133.3	c. 9750	124.3	.....	.....	1.2250	131.6
1891	.600	104.7	1.1760	123.1	c. 9750	124.3	.....	.....	1.1270	121.1
1892	.625	109.1	1.0780	112.8	c. 9700	123.6	.....	.....	1.0790	115.8
1893	.600	104.7	1.0535	110.3	c. 8750	111.5	1.900	102.7	1.0535	113.2
1894	.560	96.0	.9900	102.6	c. 7250	92.4	1.900	102.7	.9900	105.3
1895	.530	92.5	.9065	94.9	c. 7000	89.2	1.875	101.4	.8575	92.1
1896	.520	90.8	.8330	87.2	c. 7000	89.2	1.875	101.4	.7940	84.2
1897	.570	99.5	.7840	82.1	c. 6500	82.9	1.850	100.0	.7595	81.6
1898	.570	99.5	.7350	76.9	c. 6500	82.9	1.800	97.3	.7105	76.3
1899	.540	94.2	.7350	76.9	c. 6250	79.7	1.750	94.6	.7350	78.9
1900	.690	118.7	.7840	82.1	c. 6500	82.9	1.900	102.7	.7595	81.6
1901	.630	109.9	.6960	71.8	c. 7250	92.4	2.000	108.1	.6615	71.1
1902	.630	109.9	.7350	76.9	.6667	85.0	1.850	100.0	.7350	78.9
1903	.675	117.8	.7840	82.1	.7063	90.0	1.875	101.4	.8065	86.8

* Freight paid.

b Records destroyed.

c September price.

Price estimated by person who furnished data for later years.

d Average for 1890-1899.

e January price.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.									
	Leather: harness, oak, country middles.		Leather: sole, hemlock, Buenos Ayres.		Leather: sole, oak.		Leather: wax calf, 30 to 40 lbs. to the dozen.		Leather shoe thread, 10s. Barbour.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per sq. foot.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	\$0.2590	100.0	\$0.1939	100.0	\$0.3363	100.0	\$0.6545	100.0	\$0.8748	100.0
1890	.2571	99.3	.1921	99.1	.3771	112.1	.6000	91.7	.8910	101.9
1891	.2579	99.6	.1858	95.8	.3679	109.4	.6469	98.8	.8910	101.9
1892	.2567	91.4	.1727	89.1	.3421	101.7	.6929	105.9	.8910	101.9
1893	.2400	92.7	.1796	92.6	.3483	103.6	.6450	98.5	.8993	102.8
1894	.2276	87.8	.1715	88.4	.3279	97.5	.6042	92.3	.9182	105.0
1895	.2268	111.5	.2073	106.9	.3421	101.7	.7333	112.0	.8514	97.3
1896	.2554	98.6	.1891	97.0	.2925	87.0	.6433	98.3	.8514	97.3
1897	.2433	93.9	.2033	104.8	.3079	91.6	.6156	94.1	.8514	97.3
1898	.2825	109.1	.2129	109.8	.3213	95.5	.6760	103.3	.8514	97.3
1899	.3004	116.0	.2254	116.2	.3358	99.9	.6875	105.0	.8514	97.3
1900	.3025	116.8	.2490	128.4	.3608	107.3	.6563	100.3	.8877	101.5
1901	.2971	114.7	.2475	127.6	.3525	104.8	.6281	96.0	.8910	101.9
1902	a. 3325	a114.7	.2367	122.1	.3800	113.0	.6604	100.9	.8910	101.9
1903	a. 3813	a114.3	.2267	116.9	.3742	111.3	.6900	105.4	.8460	96.7

Year.	Cloths and clothing.									
	Linen thread: 3-cord, 200-yard spools, Barbour.		Overcoatings: beaver, Moscow, all wool.		Overcoatings: chinchilla, all wool.		Overcoatings: chinchilla, cotton warp.		Overcoatings: covert cloth, light weight.	
	Average price per dozen spools.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	\$0.8522	100.0	\$2.0817	100.0	\$2.1419	100.0	\$0.4883	100.0	\$2.3286	100.0
1890	.8910	104.6	b2.4296	116.7	b2.4296	113.4	.5325	109.1	2.4616	105.7
1891	.7945	93.2	b2.4296	116.7	b2.4296	113.4	.5258	107.7	2.4616	105.7
1892	.8019	94.1	b2.4296	116.7	b2.4296	113.4	.5329	109.1	2.4616	105.7
1893	.8308	97.5	2.3250	111.7	2.3250	108.5	.5367	109.9	2.4616	105.7
1894	.8614	99.9	1.9879	95.5	1.9879	92.8	.4738	96.9	2.4254	104.2
1895	.8514	99.9	1.7670	84.9	1.8774	87.7	.4508	92.3	2.3259	99.9
1896	.8514	99.9	1.7670	84.9	1.8774	87.7	.4354	89.2	2.0363	87.4
1897	.8679	101.8	1.7670	84.9	1.8774	87.7	.4575	93.7	1.9458	83.6
1898	.8910	104.6	1.8600	89.4	2.0925	97.7	.4800	98.6	2.2625	97.2
1899	.8910	104.6	2.0538	98.7	2.0925	97.7	.4583	93.9	2.4485	104.9
1900	.8910	104.6	2.1994	120.1	2.4994	116.7	.4892	100.2	2.3621	101.4
1901	.8910	104.6	2.2088	106.1	2.0925	97.7	.4483	90.8	2.2625	97.2
1902	.8910	104.6	2.2088	106.1	2.0925	97.7	.4508	92.3	2.2625	97.2
1903	.8370	98.2	2.4413	117.3	2.2088	103.1	.4583	92.8	2.1899	94.0

Year.	Cloths and clothing.									
	Overcoatings: kenev, standard, 27 to 28 oz.		Print cloths: 28-inch, 64x64.		Shawls: standard, all wool, 72x144 in., 42-oz.		Sheetings: bleached, 10-4, Atlantic.		Sheetings: bleached, 10-4, Peppercell.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price each.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	\$1.2472	100.0	\$0.02838	100.0	\$4.5747	100.0	\$0.1836	100.0	\$0.1894	100.0
1890			.03340	117.7	4.9000	107.0	.2241	122.1	.2190	116.2
1891			.02838	103.5	4.9000	107.0	.2139	116.4	.2008	106.6
1892			.03346	119.3	4.9000	107.0	.1996	108.7	.1900	100.0
1893			.03251	114.6	4.9000	107.0	.2052	111.8	.1946	103.3
1894			.02748	96.8	4.9000	107.0	.1741	94.8	.1742	92.5
1895			.02964	100.9	4.9000	107.0	.1722	93.8	.1786	94.7
1896			.02581	90.9	4.0400	89.1	.1700	92.6	.1792	95.1
1897	1.1833	94.9	.02485	87.6	4.0970	89.5	.1604	87.4	.1738	92.3
1898	1.3000	104.2	.02059	72.6	4.1300	90.2	.1527	83.2	.1721	91.3
1899	1.2583	100.9	.02732	96.3	4.0400	89.1	.1641	89.4	.2021	107.8
1900	1.5750	126.3	.03083	108.6	4.9000	107.0	.2043	111.3	.2292	121.7
1901	1.5000	120.3	.02419	99.3	4.9000	107.0	.1863	100.9	.2117	112.4
1902	1.5000	120.3	.03090	108.9	4.9000	107.0	.1917	104.4	.2100	111.5
1903	1.5750	126.3	.082156	113.3	4.9000	107.0	.2124	115.7	.2275	120.8

a Leather: harness, oak, packers' hides, heavy, No. 1. For method of computing relative price see pages 241 and 242. Average price for 1901, \$0.3325.

b Records destroyed. Price estimated by person who furnished data for later years.

c Average for 1897-1899.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.									
	Sheetings: bleached, 10-1, Wamsutta S.T.		Sheetings: brown, 4-4, Atlantic A.		Sheetings: brown, 4-4, Indian Head.		Sheetings: brown, 4-4, Pepperell R.		Sheetings: brown, 4-4, Stark A. A.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	\$0.2949	100.0	\$0.0553	100.0	\$0.0626	100.0	\$0.0551	100.0	\$0.0525	100.0
1890	3126	106.0	0669	121.0	0725	115.8	0640	116.2	0660	125.7
1891	3162	107.2	0653	118.1	0727	116.1	0597	108.3	0594	113.1
1892	2944	99.8	0590	106.7	0648	103.5	0569	103.3	0545	103.8
1893	3056	103.6	0619	111.9	0679	108.6	0583	105.8	0574	109.3
1894	2756	93.5	0549	99.3	0598	95.5	0531	96.4	0521	99.2
1895	2719	92.2	0520	94.0	0585	93.6	0529	95.3	0513	97.7
1896	2925	99.2	0535	96.7	0622	99.4	0558	101.3	0511	97.3
1897	2925	99.2	0490	88.6	0588	93.9	0525	95.3	0462	86.1
1898	2925	99.2	0443	80.1	0540	86.3	0475	86.2	0424	80.8
1899	2951	100.1	0466	84.3	0544	86.9	0504	91.5	0451	85.9
1900	3075	104.3	0565	100.4	0623	99.5	0592	107.4	0508	96.8
1901	2925	99.2	0542	98.0	0631	100.8	0592	107.4	0494	94.1
1902	2925	99.2	0549	99.3	0625	99.8	0569	103.3	a 0566	a 92.6
1903	3038	103.0	0636	115.0	0681	108.8	0599	108.7	a 0623	a 101.9

Year.	Cloths and clothing.									
	Shirtings: bleached, 4-4, Fruit of the Loom.		Shirtings: bleached, 4-4, Hope.		Shirtings: bleached, 4-4, Lonsdale.		Shirtings: bleached, 4-4, New York Mills.		Shirtings: bleached, 4-4, Wamsutta <O>XX.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	\$0.0728	100.0	\$0.0630	100.0	\$0.0727	100.0	\$0.0876	100.0	\$0.0948	100.0
1890	0845	116.1	0726	115.2	0845	116.2	0968	110.5	1011	106.6
1891	0799	109.8	0703	111.6	0822	113.1	0965	110.2	1009	106.4
1892	0808	111.0	0663	105.2	0812	111.7	0931	106.3	0973	102.6
1893	0832	114.3	0713	113.2	0832	114.4	0925	105.6	0981	105.5
1894	0727	99.9	0620	98.4	0727	100.0	0885	101.0	0950	100.2
1895	0700	96.2	0608	96.5	0697	95.9	0851	97.1	0909	102.2
1896	0696	95.6	0620	98.4	0685	94.2	0835	101.0	0951	100.3
1897	0641	88.0	0574	91.1	0633	87.1	0836	95.4	0935	98.6
1898	0654	90.2	0518	82.2	0596	81.8	0784	89.5	0907	95.1
1899	0644	88.5	0551	87.5	0626	86.1	0725	82.8	0892	94.1
1900	0753	103.4	0671	106.5	0731	100.6	0786	89.7	0965	101.8
1901	0750	103.0	0699	111.0	0738	101.5	0760	86.8	0875	92.3
1902	0756	103.8	0676	107.3	0741	101.9	0766	87.4	0885	93.4
1903	0767	105.4	0675	107.1	0755	103.9	0850	97.0	0974	102.7

Year.	Cloths and clothing.									
	Silk: raw, Italian, classical.		Silk: raw, Japan, filatures.		Sutings: clay worsted diagonal, 12-oz.		Sutings: clay worsted diagonal, 16-oz.		Sutings: Indigo blue, all wool, 14-oz., Middlesex.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	\$4.2558	100.0	\$4.0187	100.0	\$0.8236	100.0	\$1.0068	100.0	\$1.3230	100.0
1890	5.2238	122.7	5.2429	130.5	.....	.....	.....	.....	1.5470	116.9
1891	4.1865	98.4	4.0110	99.8	.....	.....	.....	.....	1.5470	116.9
1892	4.4826	105.3	4.3266	107.7	.....	.....	.....	.....	1.5470	116.9
1893	5.0290	118.2	4.5409	113.0	.....	.....	.....	.....	1.5084	114.0
1894	3.6816	86.5	3.3627	83.7	.....	.....	.....	.....	1.4697	111.1
1895	4.0373	94.9	3.7855	94.2	7621	92.5	9445	93.8	1.1523	87.1
1896	3.2983	85.3	3.4072	84.8	7337	89.1	8819	87.6	1.1375	86.0
1897	3.6404	85.5	3.4637	86.2	7595	92.2	9392	93.3	1.0465	79.1
1898	3.8768	91.1	3.6376	90.5	9185	111.3	1.1216	111.4	1.1375	86.0
1899	4.7706	112.1	4.4085	109.7	9461	114.9	1.1468	113.9	1.1375	86.0
1900	4.5128	106.0	4.1690	103.7	1.0819	131.4	1.1463	133.7	1.1375	86.0
1901	3.8466	90.4	3.5132	87.4	9113	110.6	1.1175	111.0	1.1849	89.6
1902	4.1085	96.5	3.8224	95.1	9131	110.9	1.0931	108.6	1.3119	99.2
1903	4.5241	106.3	4.1346	102.9	9488	115.2	1.1298	112.1	1.4400	108.8

*Sheetings: brown, 4-4, Massachusetts Mills, Flying Horse brand. For method of computing relative price see pages 241 and 242. Average price for 1901, \$0.0575.

*Average for 1895-1899.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.									
	Suits: indigo blue, all wool, 16-oz.		Suits: serge, Wash-ton Mills 6700.		Tickings: Amoskeag A. C. A.		Trouserings: fancy worsted, 22 to 23-oz.		Underwear: white, all wool, etc.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price, 12 garments.	Relative price.
Average, 1890-1899.	\$1.9154	100.0	\$0.7526	100.0	\$0.1061	100.0	\$1.9456	100.0	\$23.21	100.0
1890	^b 2.0925	109.2			.1200	113.1			24.76	106.2
1891	^b 2.0925	109.2			.1175	110.7			25.65	110.0
1892	^b 2.0925	109.2	.9100	120.9	.1150	108.4	2.0734	106.6	25.65	110.0
1893	2.0925	109.2	.9100	120.9	.1181	111.3	2.0734	106.6	25.65	110.0
1894	1.7670	92.3	.6825	90.7	.1064	102.2	1.9238	98.9	21.60	92.7
1895	1.5903	83.0	.6825	90.7	.1006	94.8	1.7100	87.9	21.60	92.7
1896	1.7228	89.9	.6143	81.6	.1019	96.0	1.7955	92.3	21.60	92.7
1897	1.6740	87.4	.6598	87.7	.0976	91.9	1.7955	92.3	21.60	92.7
1898	1.9763	103.2	.7508	99.8	.0894	84.3	2.1197	108.9	21.60	92.7
1899	2.0538	107.2	.8106	107.7	.0923	87.0	2.0734	106.6	23.40	100.4
1900	2.2669	118.4	.8100	107.6	.1084	102.2	2.2871	117.6	23.40	100.4
1901	2.0925	109.2	.8025	106.6	.1013	95.5	1.9879	102.2	23.40	100.4
1902	2.0925	109.2	.7913	105.1	.1050	99.0	1.9800	101.8	23.40	100.4
1903	2.1576	112.6	.7566	100.4	.1104	104.1	^c 2.0925	104.6	23.40	100.4

Year.	Cloths and clothing.									
	Underwear: white merino, 52½ wool, etc.		Women's dress goods: alpaca, cotton warp, 22-inch, Hamilton.		Women's dress goods: cashmere, all wool, Atlantic J.		Women's dress goods: cashmere, cotton warp, Atl. F.		Women's dress goods: cashmere, cot. warp, 22-in. Hamilton.	
	Average price, 12 garments.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899.	\$15.57	100.0	\$0.0680	100.0	\$0.2905	100.0	\$0.1520	100.0	\$0.0758	100.0
1890	16.65	106.9	.0735	108.1	.3479	119.8	.1813	119.3	.0683	109.9
1891	17.56	112.7	.0735	108.1	.3663	126.1	.1813	119.3	.0683	109.9
1892	17.56	112.7	.0723	106.3	.3724	128.2	.1799	117.7	.0621	106.3
1893	17.56	112.7	.0711	104.6	.3247	111.8	.1496	98.4	.0609	106.7
1894	14.85	95.4	.0646	100.9	.2450	84.3	.1348	88.7	.0760	100.3
1895	14.40	92.5	.0637	93.7	.2352	81.0	.1274	83.8	.0735	97.0
1896	14.40	92.5	.0637	93.7	.1960	67.5	.1270	83.6	.0711	93.8
1897	14.40	92.5	.0637	93.7	.2389	82.2	.1372	90.3	.0686	90.5
1898	14.85	95.4	.0637	93.7	.2573	88.6	.1434	94.3	.0686	90.5
1899	13.50	86.7	.0657	96.6	.3208	110.4	.1598	104.8	.0708	93.1
1900	14.85	95.4	.0711	104.6	.3469	119.1	.1642	108.0	.0760	100.3
1901	14.85	95.4	.0711	104.6	.3234	111.3	.1585	104.3	.0760	100.3
1902	14.85	95.4	.0705	103.7	.3234	111.3	.1642	108.0	.0754	99.5
1903	^d 16.20	^d 95.4	.0690	101.5	.3320	114.3	.1679	110.6	.0741	97.8

Year.	Cloths and clothing.									
	Women's dress goods: cashmere, cot. warp, 27-in. Hamilton.		Women's dress goods: Franklin sackings, 6-4.		Wool: Ohio, fine fleece (X and XX grade), scoured.		Wool: Ohio, medium fleece (1 and 2 grade), scoured.		Worsted yarns: 2-40s, Australian fine.	
	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899.	\$0.0883	100.0	\$0.5151	100.0	\$0.5626	100.0	\$0.4564	100.0	\$1.0183	100.0
1890	.0960	111.0	.5938	115.3	.7156	125.5	.6143	134.6	1.2263	120.4
1891	.0960	111.0	.6175	119.9	.6857	124.1	.5820	127.6	1.2354	121.3
1892	.0964	109.6	.6175	119.9	.6119	110.7	.5276	115.6	1.2175	119.6
1893	.0937	106.1	.6056	117.6	.5639	102.0	.4620	101.2	1.1342	111.4
1894	.0907	102.7	.1988	96.8	.4448	80.5	.3542	77.6	.9232	91.3
1895	.0846	95.8	.4342	84.3	.3768	68.2	.3280	71.9	.7425	72.9
1896	.0821	93.0	.1156	80.7	.3940	71.3	.3186	69.8	.7265	71.2
1897	.0794	89.8	.4235	82.2	.4955	89.7	.3999	87.6	.8517	83.6
1898	.0784	88.8	.4552	88.4	.6150	111.3	.4805	105.3	1.0308	101.2
1899	.0821	93.0	.4849	94.9	.6232	112.8	.4966	108.8	1.0908	107.1
1900	.0882	99.9	.6096	118.3	.6594	119.3	.5296	116.0	1.2050	118.8
1901	.0907	102.7	.5383	104.5	.5458	98.7	.4315	94.5	1.0404	102.2
1902	.0901	102.0	.5581	108.3	.5770	104.4	.4486	97.2	1.1229	110.8
1903	.0894	101.2	.5898	114.5	.6546	118.5	.4658	102.1	1.1771	115.6

^a Average for 1892-1899.

^b Records destroyed. Price estimated by person who furnished data for later years.

^c 21 to 23 ounce. For method of computing relative price see pages 241 and 242.

^d 60 per cent wool, etc. For method of computing relative price see page 242.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.		Fuel and lighting.							
	Worsted yarns: 2-40s, XXX, white, in skeins.		Candles: ada- mantine, 6s, 14-ounce.		Coal: anthra- cite, broken.		Coal: anthra- cite, chestnut.		Coal: anthra- cite, egg.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899.	\$1.0071	100.0	\$0.0782	100.0	\$3.3669	100.0	\$3.5953	100.0	\$3.5936	100.0
1890	1.2500	124.1	.0800	102.3	3.4858	103.5	3.3533	93.3	3.6142	100.6
1891	1.2625	125.4	.0800	102.3	3.4433	102.3	3.4756	96.7	3.7506	104.4
1892	1.1563	114.8	.0800	102.3	3.6152	107.4	3.9443	109.7	3.9803	110.8
1893	1.0833	107.6	.0883	112.9	3.5628	106.8	4.1673	115.9	3.8520	107.2
1894	.9188	91.2	.0867	110.9	3.4172	101.5	3.5416	98.5	3.3903	94.3
1895	.7563	75.1	.0850	108.7	3.2833	97.5	2.9793	82.9	3.0296	84.3
1896	.7600	74.5	.0850	108.7	3.2691	97.1	3.5561	98.9	3.5490	98.8
1897	.8188	81.3	.0745	95.3	3.2465	96.4	3.7366	103.9	3.7996	105.7
1898	1.0042	99.7	.0613	78.4	3.2108	95.4	3.5525	98.8	3.5993	100.2
1899	1.0708	106.3	.0613	78.4	3.1350	93.1	3.6458	101.4	3.3714	93.8
1900	1.1938	118.5	.1059	135.4	3.2706	97.1	3.9166	108.9	3.5643	99.7
1901	1.0288	102.1	.1100	140.7	3.5508	105.5	4.3270	120.4	4.0565	112.9
1902	1.1392	113.1	.1100	140.7	3.7186	110.4	4.4597	124.0	4.3673	121.5
1903	1.2125	120.4	.0996	127.4	4.2496	126.2	4.8251	134.2	4.8251	134.3

Year.	Fuel and lighting.								Coke: Con- nellville, fur- nace.	
	Coal: anthra- cite, stove.		Coal: bitumi- nous, Georges Creek (at mine).		Coal: bit. Georges Creek (f. o. b. N. Y. Harbor).		Coal: bit. Pitts- burg (Yough- leny).			
	Average price per ton.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.	Average price per bushel.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899.	\$3.7919	100.0	\$0.8887	100.0	\$2.7129	100.0	\$0.0613	100.0	\$1.6983	100.0
1890	3.7108	97.8	.8625	97.1	2.9875	108.9	.0664	103.3	2.0833	122.7
1891	3.8542	101.6	.9500	106.9	3.0313	110.5	.0789	122.7	1.8750	110.4
1892	4.1532	109.4	.9000	101.3	2.9313	106.9	.0749	116.5	1.8083	106.5
1893	4.1931	110.5	.9208	103.6	2.9500	107.6	.0758	117.9	1.4792	87.1
1894	3.6003	94.9	.8208	92.4	2.7375	99.8	.0634	98.6	1.0583	62.3
1895	3.1264	82.4	.7750	87.2	2.8125	102.5	.0600	93.3	1.3250	78.0
1896	3.7942	100.0	.9000	101.3	2.6625	97.1	.0573	89.1	1.8750	110.4
1897	4.0146	105.8	.8383	93.8	2.4417	89.0	.0570	88.6	1.6167	95.2
1898	3.7978	100.1	.9125	102.7	2.7550	79.3	.0565	87.9	1.6771	98.8
1899	3.7017	97.6	1.0125	113.9	2.7000	98.4	.0531	82.6	2.1854	128.7
1900	3.9451	104.0	1.2000	135.0	2.9083	106.0	.0752	117.0	2.6458	155.8
1901	4.3224	113.9	1.3375	150.5	2.9250	106.6	.0752	117.0	1.9625	115.6
1902	4.4627	117.6	2.1250	239.1	4.0583	148.0	.0787	122.4	2.6875	158.2
1903	4.8245	127.1	2.3058	269.6	4.4375	161.8	.0925	148.9	2.9125	171.5

Year.	Fuel and lighting.								Metals and im- plements.	
	Matches: par- lor, domestic.		Petroleum: crude.		Petroleum: re- fined, for export.		Petroleum: re- fined, 150° test.		Angers: extra, 4-inch.	
	Average price per gross of boxes (200s.).	Relative price.	Average price per barrel.	Relative price.	Average price per gallon.	Relative price.	Average price per gallon.	Relative price.	Average price each.	Relative price.
Average, 1890-1899.	\$1.7563	100.0	\$0.9102	100.0	\$0.0649	100.0	\$0.0890	100.0	\$0.1608	100.0
1890	1.9583	111.5	.8660	95.4	.0733	112.9	.0955	111.8	.1900	118.2
1891	1.7500	99.6	.6697	73.6	.0685	105.5	.0879	98.8	.1900	118.2
1892	1.7500	99.6	.5564	61.1	.0609	93.8	.0794	89.2	.1900	118.2
1893	1.7500	99.6	.6399	70.3	.0522	80.4	.0725	81.5	.1900	111.9
1894	1.6667	94.9	.8389	92.2	.0615	79.4	.0725	81.5	.1542	95.9
1895	1.6675	96.1	1.3581	149.2	.0711	109.6	.0922	103.6	.1333	82.9
1896	1.7500	99.6	1.1789	129.5	.0702	108.2	.1039	116.7	.1394	86.7
1897	1.7500	99.6	.7869	86.5	.0597	92.0	.0900	101.1	.1425	88.6
1898	1.7500	99.6	.9118	100.2	.0628	96.8	.0909	102.1	.1425	88.6
1899	1.7500	99.6	1.2934	142.1	.0791	121.9	.1015	114.0	.1465	91.1
1900	1.7500	99.6	1.3521	148.5	.0854	131.6	.1188	133.5	.2000	124.4
1901	1.7500	99.6	1.2065	132.9	.0749	115.4	.1096	123.1	.1700	105.7
1902	1.5883	90.1	1.2229	135.9	.0734	113.1	.1108	124.5	.1800	111.9
1903	1.5000	85.4	1.5886	171.5	.0960	132.5	.1363	153.1	.2310	143.7

a Designated as XXXX.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Metals and implements.									
	Axes: M. C. O., Yankee.		Bar iron: best refined, from mill (Pittsburg market).		Bar iron: best refined, from store (Philadel- phia market).		Barb wire: galvanized.		Butts: loose joint, cast, 3 x 3 inch.	
	Average price each.	Rela- tive price.	Average price per lb.	Rela- tive price.	Average price per lb.	Rela- tive price.	Average price per 100 lbs.	Rela- tive price.	Average price per pair.	Rela- tive price.
Average, 1890-1899..	\$0.4693	100.0	\$0.0145	100.0	\$0.0164	100.0	\$2.5261	100.0	\$0.0316	100.0
1890.....	.5650	120.4	.0184	126.9	.0205	125.0	3.5665	141.2	.0353	111.7
1891.....	.5550	118.3	.0171	117.9	.0190	115.9	3.2189	127.4	.0353	111.7
1892.....	.5000	106.5	.0164	113.1	.0187	114.0	2.7662	109.5	.0306	96.8
1893.....	.5000	106.5	.0150	103.4	.0170	103.7	2.5188	99.7	.0311	98.4
1894.....	.4738	100.9	.0120	82.8	.0134	81.7	2.1750	86.1	.0303	95.9
1895.....	.4600	98.0	.0125	86.2	.0144	87.8	2.2458	88.9	.0317	100.3
1896.....	.4150	88.4	.0122	84.1	.0140	85.4	1.9625	77.7	.0329	104.1
1897.....	.3938	83.9	.0110	75.9	.0131	79.9	1.8000	71.3	.0306	96.8
1898.....	.3750	79.9	.0107	73.8	.0128	78.0	1.8375	72.7	.0292	92.4
1899.....	.4555	97.1	.0195	134.5	.0207	126.2	3.1696	125.5	.0292	92.4
1900.....	.4831	102.9	.0215	148.3	.0196	119.5	3.3942	134.4	.0400	126.6
1901.....	.4168	88.8	.0180	124.1	.0184	112.2	3.0875	120.2	.0369	116.8
1902.....	.4833	103.0	.0194	133.8	.0213	129.9	2.9542	116.9	.0400	126.6
1903.....	.5050	107.6	.0177	122.1	.0200	122.0	2.7375	108.4	.0400	126.6

Year.	Metals and implements.									
	Chisels: extra, socket firmer, 1-inch.		Copper: ingot, lake.		Copper: sheet, hot-rolled (base sizes).		Copper wire: bare.		Doorknobs: steel, bronze plated.	
	Average price each.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per pair.	Rela- tive price.
Average, 1890-1899..	\$0.1894	100.0	\$0.1234	100.0	\$0.1659	100.0	\$0.1464	100.0	\$0.1697	100.0
1890.....	.2100	110.9	.1575	127.6	.2275	137.1	.1875	128.1	.1660	97.8
1891.....	.2100	110.9	.1305	106.8	.1900	114.5	.1650	112.7	.1660	97.8
1892.....	.2100	110.9	.1154	93.5	.1600	96.4	.1438	98.2	.1660	97.8
1893.....	.1933	102.1	.1083	88.6	.1500	90.4	.1350	92.2	.1660	97.8
1894.....	.1733	91.5	.0948	76.8	.1425	85.9	.1156	79.0	.1660	97.8
1895.....	.1710	90.3	.1075	87.1	.1425	85.9	.1238	84.6	.1953	115.1
1896.....	.1793	94.7	.1097	88.9	.1425	85.9	.1356	92.6	.1733	102.1
1897.....	.1710	90.3	.1132	91.7	.1463	88.2	.1375	93.9	.1660	97.8
1898.....	.1720	90.8	.1194	96.8	.1400	84.4	.1375	93.9	.1660	97.8
1899.....	.2038	107.6	.1767	143.2	.2175	131.1	.1925	134.7	.1660	97.8
1900.....	.2117	127.6	.1661	134.6	.2067	124.6	.1800	123.0	.1813	106.8
1901.....	.2300	121.4	.1687	136.7	.2088	125.9	.1815	124.0	.1900	112.0
1902.....	.2700	142.6	.1201	97.3	.1783	107.5	.1326	90.6	.2153	126.9
1903.....	.2900	147.8	.1368	110.9	.1917	115.6	.1497	102.3	.2250	132.6

Year.	Metals and implements.									
	Files: 8-inch mill bastard.		Hammers: Maydole No. 14.		Lead: pig.		Lead pipe.		Locks: com- mon mortise.	
	Average price per dozen.	Rela- tive price.	Average price each.	Rela- tive price.	Average price per pound.	Rela- tive price.	Average price per 100 lbs.	Rela- tive price.	Average price each.	Rela- tive price.
Average, 1890-1899..	\$0.8527	100.0	\$0.3613	100.0	\$0.0381	100.0	\$4.8183	100.0	\$0.0817	100.0
1890.....	.9100	106.7	.3500	96.9	.0440	115.5	5.4000	112.1	.0830	101.6
1891.....	.8917	104.6	.3500	96.9	.0437	114.7	5.6000	116.2	.0830	101.6
1892.....	.8717	102.2	.3500	96.9	.0413	108.4	5.1833	107.6	.0830	101.6
1893.....	.8667	101.6	.3500	96.9	.0374	98.2	5.0000	103.8	.0830	101.6
1894.....	.8300	97.3	.3500	96.9	.0331	86.9	4.4333	92.0	.0818	100.1
1895.....	.8133	95.4	.3525	97.6	.0328	85.6	4.2000	87.2	.0833	102.0
1896.....	.7775	91.2	.3800	105.2	.0300	78.7	4.1000	85.1	.0867	105.1
1897.....	.8050	94.4	.3900	108.2	.0358	94.0	4.3167	89.6	.0833	102.0
1898.....	.8250	96.8	.3633	100.6	.0380	99.7	4.6000	95.5	.0750	91.8
1899.....	.9358	109.7	.3967	107.0	.0448	117.6	5.3500	111.0	.0780	91.8
1900.....	1.0900	127.8	.4189	115.9	.0445	116.8	5.1208	106.3	.0728	88.5
1901.....	1.0500	123.1	.4238	117.2	.0438	115.0	5.0479	104.8	.0750	91.8
1902.....	1.0500	123.1	.4233	117.2	.0411	107.9	5.2167	108.3	.0850	104.0
1903.....	1.0500	123.1	.4660	129.0	.0428	112.3	5.1956	107.8	.0900	110.2

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Metals and implements.									
	Nails: cut, 8-penny, fence and common.		Nails: wire, 8-penny, fence and common.		Pig iron: Bessemer.		Pig iron: foundry No. 1.		Pig iron: foundry No. 2.	
	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899..	\$1.8275	100.0	\$2.1618	100.0	\$13.7783	100.0	\$14.8042	100.0	\$13.0533	100.0
1890	2.2875	125.2	2.9646	137.1	18.8725	137.0	18.4083	124.3	17.1563	131.4
1891	1.8338	100.8	2.4667	114.1	15.9500	115.8	17.5208	118.4	15.3958	117.9
1892	1.7583	96.2	2.1896	101.3	14.3667	104.3	15.7192	106.4	13.7729	105.5
1893	1.6813	92.0	1.9917	92.1	12.8692	93.4	14.5167	98.1	12.4396	95.3
1894	1.5271	83.6	1.6521	76.4	11.3775	82.6	12.6642	85.5	10.8458	89.1
1895	1.9250	105.8	2.1177	98.0	12.7167	92.3	13.1033	88.5	11.6750	89.4
1896	2.7125	148.4	2.9250	135.3	12.1100	88.1	12.9550	87.5	11.7708	90.2
1897	1.3329	72.9	1.4854	68.7	10.1258	73.5	12.1008	81.7	10.1000	77.4
1898	1.1927	65.3	1.4375	66.5	10.3317	75.0	11.6608	78.8	10.0271	76.8
1899	2.0240	110.8	2.3875	110.4	19.0333	138.1	19.3633	130.8	17.3500	132.9
1900	2.2500	123.1	2.6333	121.8	19.4925	141.5	19.9800	135.0	18.5063	141.8
1901	2.1125	115.6	2.5646	109.4	15.9350	115.7	15.8633	107.2	11.7188	112.8
1902	2.1333	116.7	2.1042	97.3	20.6712	150.0	22.1933	149.9	21.2396	162.7
1903	2.1958	120.2	2.0750	96.0	18.9758	137.7	19.9158	134.5	19.1417	146.6

Year.	Metals and implements.									
	Pig iron: gray forge, Southern, coke.		Planes: Bailey No. 5.		Quicksilver.		Saws: cross-cut, Disston.		Saws: hand, Disston No. 7.	
	Average price per ton.	Relative price.	Average price each.	Relative price.	Average price per pound.	Relative price.	Average price each.	Relative price.	Average price per dozen.	Relative price.
Average, 1890-1899..	\$11.0892	100.0	\$1.3220	100.0	\$0.5583	100.0	\$1.6038	100.0	\$12.780	100.0
1890	14.5000	130.8	1.4200	107.4	.7300	130.5	1.6038	100.0	11.400	112.7
1891	12.5167	112.9	1.4200	107.4	.6283	112.3	1.6038	100.0	12.600	98.6
1892	11.7917	106.3	1.4200	107.4	.5642	100.9	1.6038	100.0	12.600	98.6
1893	10.6354	95.9	1.4200	107.4	.5213	93.2	1.6038	100.0	12.600	98.6
1894	8.9375	80.6	1.3783	104.3	.4792	85.7	1.6038	100.0	12.600	98.6
1895	10.3229	93.1	1.2117	93.9	.5133	91.8	1.6038	100.0	12.600	98.6
1896	9.6042	86.6	1.2300	93.0	.4979	89.0	1.6038	100.0	12.600	98.6
1897	8.8021	79.4	1.2300	93.0	.5157	92.2	1.6038	100.0	12.600	98.6
1898	8.7188	78.6	1.2300	93.0	.5425	97.0	1.6038	100.0	12.600	98.6
1899	15.0625	135.8	1.2300	93.0	.6004	107.3	1.6038	100.0	12.600	98.6
1900	15.6042	140.7	1.4142	107.0	.6709	121.0	1.6038	100.0	12.600	98.6
1901	12.5521	113.2	1.4600	110.4	.6629	118.5	1.6038	100.0	12.600	98.6
1902	17.6042	158.8	1.6100	111.2	.6158	115.5	1.6038	100.0	12.600	98.6
1903	16.2292	146.4	1.5300	115.7	.6312	113.4	1.6038	100.0	12.600	98.6

Year.	Metals and implements.									
	Shovels: Ames No. 2.		Silver: bar, fine.		Spelter: Western.		Steel billets.		Steel rails.	
	Average price per dozen.	Relative price.	Average price per ounce.	Relative price.	Average price per pound.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899..	\$7.8658	100.0	\$0.74899	100.0	\$0.0452	100.0	\$21.6262	100.0	\$26.0654	100.0
1890	7.8700	100.1	1.05829	140.6	.0554	122.6	30.4675	141.5	31.7792	121.9
1891	7.8700	100.1	.99034	132.2	.0508	112.4	25.3292	117.7	29.9167	114.8
1892	7.8700	100.1	.87552	116.9	.0465	102.9	23.6308	109.8	30.0000	115.1
1893	7.8700	100.1	.78219	104.4	.0410	90.7	20.4358	94.9	28.1250	107.9
1894	7.4500	94.7	.61043	85.5	.0355	78.5	16.5783	77.0	21.0000	92.1
1895	7.4500	94.7	.62628	88.5	.0362	80.1	18.4842	85.9	21.3333	93.4
1896	7.8100	99.3	.68195	91.0	.0401	88.7	18.8333	87.5	28.0000	107.4
1897	7.9300	100.8	.60775	81.1	.0421	93.1	15.0800	70.1	18.7500	71.9
1898	7.9300	100.8	.59065	78.9	.0453	101.2	15.3058	71.1	17.6250	67.6
1899	8.6075	109.4	.60507	80.8	.0588	130.1	31.1167	144.6	28.1250	107.9
1900	9.1200	115.9	.62065	82.9	.0442	97.8	25.0625	116.4	32.2875	123.9
1901	9.1200	115.9	.59703	79.7	.0405	89.6	24.1308	112.1	27.3333	104.9
1902	9.3550	118.9	.62816	70.5	.0487	107.7	30.6992	142.1	28.0000	107.4
1903	8.0200	102.0	.54206	72.4	.0558	123.5	27.9117	129.7	28.0000	107.4

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Metals and implements.									
	Steel sheets: black, No. 27.		Tin: pig.		Tin plates: domestic, Bessemer, coke, 14 x 20.		Tin plates: imported, Bessemer, coke, 14 x 20.		Trowels: M. C. O., brick, 10 1/4-inch.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per box, 108 lbs. (a)	Relative price.	Average price each.	Relative price.
Average, 1890-1899.	\$0.0224	100.0	\$0.1836	100.0	\$3.4148	100.0	\$4.5862	100.0	\$0.3400	100.0
1890	.....	.....	.2121	115.5	.....	.....	4.7858	104.6	.3400	100.0
1891	.....	.....	.2025	110.3	.....	.....	5.3867	116.4	.3400	100.0
1892	.....	.....	.2037	110.9	.....	.....	5.3050	115.7	.3400	100.0
1893	.....	.....	.2002	109.0	.....	.....	5.3717	117.1	.3400	100.0
1894	.0235	104.9	.1812	98.7	.....	.....	4.8917	108.7	.3400	100.0
1895	.0244	108.9	.1406	76.5	.....	.....	3.8725	84.4	.3400	100.0
1896	.0215	96.0	.1330	72.4	3.4354	100.6	3.9000	82.9	.3400	100.0
1897	.0185	87.1	.1358	74.0	3.1823	93.2	3.9025	85.1	.3400	100.0
1898	.0180	84.8	.1551	84.5	2.8500	83.5	4.0000	87.2	.3400	100.0
1899	.0267	119.2	.2721	148.2	4.1913	122.7	(c)	.....	.3400	100.0
1900	.0293	130.8	.3006	163.7	4.5775	137.0	(c)	.....	.3400	100.0
1901	.0315	140.6	.2618	142.6	4.1900	122.7	(c)	.....	.3400	100.0
1902	.0291	129.9	.2648	144.2	4.1233	120.7	(c)	.....	.3400	100.0
1903	.0280	116.1	.2816	153.4	3.9400	115.4	(c)	.....	.3400	100.0

Year.	Metals and implements.						Lumber and building materials.			
	Vices: solid box, 50-pound.		Wood screws: 1-inch, No. 10, flat head.		Zinc: sheet.		Brick: common domestic.		Carbonate of lead: American, in oil.	
	Average price each.	Relative price.	Average price per gross.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per M.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899.	\$3.9009	100.0	\$0.1510	100.0	\$5.3112	100.0	\$5.5625	100.0	\$0.0577	100.0
1890	4.1400	106.1	.1970	130.5	6.0542	114.0	6.5625	118.0	.0638	110.6
1891	4.1400	106.1	.2000	132.5	5.7192	107.7	5.7083	102.6	.0650	112.7
1892	4.2550	109.1	.2100	139.1	5.4900	103.4	5.7708	103.7	.0658	114.0
1893	4.1975	107.6	.2100	139.1	4.9942	94.0	5.8333	104.9	.0609	105.5
1894	4.0567	104.0	.1558	103.2	3.9500	74.4	5.0000	89.9	.0524	90.8
1895	3.7983	97.2	.1117	74.0	4.5217	85.1	5.8125	95.5	.0525	91.0
1896	3.7200	95.4	.1033	68.4	4.9400	93.0	5.0625	91.0	.0517	89.6
1897	3.5000	89.7	.0850	56.3	4.9400	93.0	4.9375	88.8	.0585	101.2
1898	3.2900	84.1	.0918	60.8	5.4983	103.6	5.7500	103.4	.0543	94.1
1899	3.267	100.7	.1452	96.2	7.0042	131.9	5.6975	102.2	.0568	98.4
1900	4.2633	109.4	.1820	120.5	6.0960	114.8	5.2500	94.4	.0625	108.3
1901	5.0200	128.7	.1045	69.2	5.5583	104.7	5.7656	103.7	.0576	99.8
1902	5.1300	131.5	.0952	63.0	5.7308	107.9	5.8854	96.8	.0589	101.4
1903	5.1767	132.7	.1098	72.4	6.0183	113.3	5.9063	106.2	.0615	106.6

Year.	Lumber and building materials.									
	Cement: Portland, domestic.		Cement: Rosendale.		Doors: pine.		Hemlock.		Lime: common.	
	Average price per barrel.	Relative price.	Average price per barrel.	Relative price.	Average price per door.	Relative price.	Average price per M feet.	Relative price.	Average price per barrel.	Relative price.
Average, 1890-1899.	\$1.9963	100.0	\$0.8671	100.0	\$1.0929	100.0	\$11.9625	100.0	\$0.8332	100.0
1890	.....	.....	1.0542	118.8	1.3750	125.8	12.5833	105.2	.9792	117.5
1891	.....	.....	.9417	106.2	1.2500	114.4	12.4583	104.1	.9125	109.5
1892	.....	.....	.9688	109.2	1.2500	114.4	12.2917	102.8	.9292	111.5
1893	.....	.....	.8675	100.0	1.2250	112.1	12.0000	100.0	.9292	111.5
1894	.....	.....	.9271	104.6	1.0500	96.1	11.7083	97.9	.8479	101.8
1895	1.9698	98.6	.8521	96.1	.9125	83.5	11.1458	93.2	.7813	93.8
1896	2.0000	100.2	.8333	93.9	.8375	76.6	11.1667	93.3	.6938	83.3
1897	1.9667	98.5	.7521	84.8	.8125	74.3	11.0000	92.0	.7188	86.3
1898	1.9979	100.1	.7604	85.7	.9250	84.6	11.7500	98.2	.7417	89.0
1899	2.0479	102.6	.8838	100.8	1.2917	118.2	13.5208	113.0	.7979	95.8
1900	2.1563	108.1	1.0167	114.6	1.5900	145.5	16.5000	137.9	.6833	82.0
1901	1.8896	94.7	1.0188	114.8	1.8913	173.1	15.0000	125.4	.7742	92.9
1902	1.9500	97.7	.8646	97.5	2.1208	194.1	15.8333	132.4	.8066	96.7
1903	2.0292	101.6	.8896	100.8	1.7292	158.2	16.7917	140.4	.7676	91.6

* Duty paid.

* Average for the period July, 1894, to December, 1899.

* Average for 1896-1899.

* Average for 1890-1893.

* No quotation for year.

* Average for 1896-1899.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Lumber and building materials.									
	Linseed oil: raw.		Maple: hard.		Oak: white, plain.		Oak: white, quartered.		Oxide of zinc.	
	Average price per gallon.	Relative price.	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899...	\$0.4535	100.0	\$26.5042	100.0	\$37.4292	100.0	\$53.6771	100.0	\$0.0400	100.0
1890	.6158	135.8	26.5000	100.0	37.8750	101.2	51.4583	95.9	.0425	106.3
1891	.4842	106.8	26.5000	100.0	38.0000	101.5	53.5933	99.8	.0419	104.8
1892	.4083	90.0	26.5000	100.0	38.4583	102.7	53.0000	98.7	.0426	106.6
1893	.4633	102.2	26.5000	100.0	38.7500	103.5	53.0000	98.7	.0413	103.3
1894	.5242	115.6	26.5000	100.0	37.2500	99.5	51.1250	95.2	.0373	93.8
1895	.5242	115.6	26.5000	100.0	36.2500	96.8	53.2500	99.2	.0350	87.6
1896	.3683	81.2	26.5000	100.0	36.2500	96.8	54.5000	101.5	.0383	95.8
1897	.3275	72.2	26.5000	100.0	36.2500	96.8	53.8333	100.3	.0377	94.3
1898	.3925	86.5	26.5000	100.0	36.2500	96.8	52.5000	97.8	.0396	99.0
1899	.4267	94.1	26.5417	100.1	38.9583	104.1	60.5208	112.7	.0438	109.5
1900	.6292	138.7	27.5000	103.8	40.8333	109.1	64.4583	120.1	.0451	112.8
1901	.6350	140.0	26.7083	100.8	36.7708	98.2	59.1667	110.2	.0438	109.5
1902	.5933	130.8	28.5833	107.8	40.8750	109.2	63.0833	117.5	.0440	110.0
1903	.4167	91.9	31.6667	119.5	44.8333	119.8	74.7917	139.3	.0463	115.8

Year.	Lumber and building materials.									
	Pine: white, boards, No. 2 barn.		Pine: white, boards, uppers.		Pine: yellow.		Plate glass: polished, 3 to 5 sq. ft.		Plate glass: polished, 5 to 10 sq. ft.	
	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per sq. ft.	Relative price.	Average price per sq. ft.	Relative price.
Average, 1890-1899...	\$17.1104	100.0	\$46.5542	100.0	\$18.4648	100.0	\$0.3630	100.0	\$0.5190	100.0
1890	16.7917	98.1	44.0833	94.7	20.7500	112.4	.5300	146.0	.7000	134.9
1891	17.0000	99.4	45.0000	96.7	19.9583	108.1	.5200	143.3	.6900	132.9
1892	17.1158	100.2	46.0417	98.9	18.5000	100.2	.4200	115.7	.5500	106.0
1893	18.6250	108.9	48.5000	104.2	18.5000	100.2	.4200	115.7	.5500	106.0
1894	18.1667	106.2	46.4167	99.7	18.5000	100.2	.3300	90.9	.4500	86.7
1895	17.2500	100.8	46.0000	98.8	16.9167	91.6	.3000	82.6	.4800	92.6
1896	16.5000	96.4	46.6250	100.2	16.4167	88.9	.3400	93.7	.5400	104.0
1897	15.8333	92.5	46.3333	99.5	16.4375	89.0	.2000	55.1	.3200	61.7
1898	15.5000	90.6	46.0833	99.0	18.6250	100.6	.2700	74.4	.4300	82.9
1899	18.2917	106.9	50.4583	108.4	20.0417	108.5	.3000	82.6	.4800	92.6
1900	21.5000	125.7	57.5000	123.5	20.7083	112.2	.3400	93.7	.5400	104.0
1901	20.8750	122.0	60.4167	129.8	19.6967	106.5	.3200	88.2	.4900	94.4
1902	23.5000	137.3	74.8333	160.7	21.0000	113.7	.2575	70.9	.4118	79.2
1903	24.0000	140.3	80.0000	171.8	21.0000	113.7	.2625	72.3	.4313	83.1

Year.	Lumber and building materials.									
	Poplar.		Putty.		Resin: good, strained.		Shingles: cypress.		Shingles: white pine, 18 in.	
	Average price per M feet.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per M.	Relative price.	Average price per M.	Relative price.
Average, 1890-1899...	\$31.3667	100.0	\$0.0138	100.0	\$1.4399	100.0	\$2.8213	100.0	\$3.7434	100.0
1890	30.5000	97.2	.0175	110.8	1.3844	96.1	3.3500	118.7	3.8117	102.6
1891	30.5000	97.2	.0175	110.8	1.4740	102.4	3.2500	115.2	4.0000	106.9
1892	30.6042	97.6	.0161	101.9	1.3117	93.2	3.1500	111.7	3.9063	104.4
1893	33.6250	107.2	.0160	101.3	1.2615	87.6	3.0000	106.3	3.8500	102.8
1894	31.7500	101.2	.0157	99.4	1.2510	86.9	2.8000	99.2	3.7500	100.2
1895	31.0000	98.8	.0145	91.8	1.5615	108.4	2.6500	93.9	3.7000	98.8
1896	31.0000	98.8	.0145	91.8	1.7458	121.2	2.5000	88.6	3.6125	95.5
1897	30.6667	97.8	.0115	91.8	1.6125	112.0	2.3500	83.3	3.5417	94.6
1898	30.0000	95.6	.0145	91.8	1.4208	98.7	2.5000	88.6	3.5521	94.9
1899	34.0308	108.5	.0168	106.3	1.3458	93.5	2.6625	94.4	3.6792	98.3
1900	37.6875	120.2	.0190	120.3	1.6021	111.3	2.8000	101.0	4.0000	106.9
1901	36.7083	117.0	.0130	94.9	1.5302	106.3	2.8500	101.0	4.1875	111.9
1902	42.1042	134.2	.0192	121.5	1.6125	112.0	2.6708	94.7	3.5875	95.8
1903	49.6458	158.3	.0111	89.2	2.2156	153.9	2.5667	91.0	3.6500	97.5

Shingles: Michigan white pine, 16 inches long, XXXX. For method of computing relative price see pages 241 and 242. Average price for 1901, \$3.3825.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Lumber and building materials.									
	Spruce.		Tar.		Turpentine: spirits of.		Window glass: American, single, firsts, 6 x 8 to 10 x 15 inch.		Window glass: American, single, thirds, 6 x 8 to 10 x 15 inch.	
	Average price per M feet.	Relative price.	Average price per barrel.	Relative price.	Average price per gallon.	Relative price.	Average price per 50 sq. ft.	Relative price.	Average price per 50 sq. ft.	Relative price.
Average, 1890-1899.	\$14.3489	100.0	\$1.2048	100.0	\$0.3343	100.0	\$2.1514	100.0	\$1.8190	100.0
1890	16.2917	113.5	1.4750	122.4	.4080	122.0	2.2283	103.6	1.7868	98.2
1891	14.2183	99.1	1.5833	131.4	.3795	113.5	2.2125	102.8	1.7700	97.8
1892	14.8542	103.5	1.3000	107.9	.3227	96.5	1.9935	92.7	1.5948	87.7
1893	13.7708	96.0	1.0458	86.8	.3002	90.8	2.1375	99.4	1.7100	94.0
1894	12.7083	88.6	1.0917	90.6	.2982	87.7	1.9918	92.6	1.6326	89.8
1895	14.2500	99.3	1.1417	94.8	.2923	87.4	1.5988	74.3	1.8919	76.5
1896	11.2500	77.6	1.0125	84.0	.2748	82.1	1.8021	83.8	1.6000	88.0
1897	14.0000	97.6	1.0542	87.5	.2924	87.5	2.1986	102.2	1.9630	107.9
1898	13.7500	95.8	1.0979	91.1	.3221	96.4	2.6432	122.9	2.3428	128.8
1899	15.3958	107.3	1.2458	103.4	.4581	137.0	2.7081	125.9	2.3986	131.9
1900	17.3750	121.1	1.3625	113.1	.4771	142.7	2.6890	126.5	2.3194	127.5
1901	18.0000	125.4	1.2817	106.4	.3729	111.5	4.1282	191.9	3.2823	180.4
1902	19.2500	134.2	1.2250	110.0	.4740	141.8	3.2187	149.6	2.5649	141.0
1903	19.1875	133.7	1.6792	139.4	.5715	171.0	2.6400	122.7	2.1600	118.7

Year.	Drugs and chemicals.							
	Alcohol: grain, 94 per cent.		Alcohol: wood, refined, 96 per cent.		Alum: lump.		Brimstone: crude, seconds.	
	Average price per gallon.	Relative price.	Average price per gallon.	Relative price.	Average price per pound.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899.	\$2.2405	100.0	\$0.9639	100.0	\$0.0167	100.0	\$20.6966	100.0
1890	2.0717	92.5	1.1375	119.2	.0182	109.0	21.1468	102.2
1891	2.2150	98.9	1.1598	121.6	.0168	94.6	28.6042	138.2
1892	2.1417	95.6	1.2973	136.0	.0180	95.8	24.1468	116.7
1893	2.1808	97.3	1.2917	135.4	.0174	104.2	18.7292	90.5
1894	2.1521	96.1	.7198	75.5	.0169	101.2	16.5633	80.1
1895	2.3292	104.0	.8667	90.9	.0160	95.8	15.6250	75.5
1896	2.3008	102.7	.8500	89.1	.0164	98.2	17.9583	86.8
1897	2.2767	101.6	.6958	72.9	.0166	99.4	20.1250	97.2
1898	2.3250	103.8	.7500	78.6	.0165	98.8	22.9167	110.7
1899	2.4117	107.6	.7708	80.8	.0168	100.6	21.1250	102.1
1900	2.3867	106.5	.8000	83.9	.0175	104.8	21.1468	102.2
1901	2.4583	109.7	.6125	64.2	.0175	104.8	22.0000	106.3
1902	2.4057	107.4	.6417	67.3	.0175	104.8	23.4375	113.2
1903	2.3968	106.9	.5917	62.0	.0173	103.6	22.3333	107.9

Year.	Drugs and chemicals.							
	Glycerin: refined.		Muriatic acid: 20°.		Opium: natural, in cases.		Quinine: American.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per ounce.	Relative price.
Average, 1890-1899.	\$0.1389	100.0	\$0.0104	100.0	\$2.3602	100.0	\$0.2460	100.0
1890	.1767	126.3	.0104	100.0	2.6208	111.0	.3275	133.1
1891	.1538	109.9	.0098	94.2	1.9438	82.4	.2506	102.0
1892	.1396	99.8	.0121	116.3	1.6708	70.8	.2183	88.7
1893	.1346	96.2	.0101	97.1	2.3917	101.3	.2150	87.4
1894	.1191	85.3	.0088	84.6	2.2954	96.8	.2621	106.5
1895	.1204	86.1	.0083	79.8	1.8413	78.0	.2506	102.0
1896	.1671	119.4	.0075	72.1	2.0917	88.6	.2406	97.5
1897	.1308	93.5	.0109	104.8	2.3417	99.2	.1829	74.3
1898	.1238	88.5	.0128	123.1	3.3417	141.6	.2146	87.2
1899	.1329	95.0	.0135	129.8	3.0729	130.2	.2975	120.9
1900	.1515	108.3	.0135	129.8	3.2000	135.6	.3325	135.2
1901	.1504	107.5	.0150	144.2	3.2292	136.8	.3025	123.0
1902	.1444	103.2	.0168	161.5	2.8313	120.0	.2675	108.7
1903	.1446	103.4	.0160	153.8	3.0813	130.6	.2885	117.2

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	Drugs and chemicals.		House furnishing goods.					
	Sulphuric acid: 66°.		Earthenware: plates, cream-colored.		Earthenware: plates, white granite.		Earthenware: teacups and saucers, white granite.	
	Average price per pound.	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per gross (6 dozens cups and 6 dozens saucers).	Relative price.
Average, 1890-1899..	\$0.0089	100.0	\$0.4136	100.0	\$0.4479	100.0	\$3.4292	100.0
1890	.0088	98.9	.4465	108.0	.4888	109.1	3.7600	109.6
1891	.0081	91.0	.4367	105.6	.4786	106.9	3.6817	107.4
1892	.0095	106.7	.4230	102.3	.4644	103.7	3.5720	104.2
1893	.0085	95.5	.4230	102.3	.4644	103.7	3.5720	104.2
1894	.0073	82.0	.4177	101.0	.4566	101.9	3.6250	102.8
1895	.0070	78.7	.3913	94.6	.4162	92.9	3.2874	94.4
1896	.0070	78.7	.3807	92.0	.3991	89.1	3.0907	90.1
1897	.0096	106.7	.3807	92.0	.3991	89.1	3.0907	90.1
1898	.0113	127.0	.4153	100.4	.4515	100.8	3.3596	98.0
1899	.0120	134.8	.4206	101.7	.4607	102.9	3.4026	99.2
1900	.0120	134.8	.4410	106.6	.4841	108.1	3.5750	104.3
1901	.0125	140.4	.4655	112.5	.5096	113.8	3.7082	109.7
1902	.0180	146.1	.4656	112.5	.5096	113.8	3.7082	109.7
1903	.0127	142.7	.4775	115.4	.4988	111.4	3.6882	107.4

Year.	House furnishing goods.							
	Furniture: bed-room sets, ash.		Furniture: chairs, bedroom, maple.		Furniture: chairs, kitchen.		Furniture: tables, kitchen.	
	Average price per set.	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.
Average, 1890-1899..	\$10.555	100.0	\$6.196	100.0	\$3.8255	100.0	\$14.435	100.0
1890	12.000	113.7	7.000	113.0	4.2000	109.8	15.000	108.9
1891	12.000	113.7	7.000	113.0	4.2000	109.8	15.000	108.9
1892	12.000	113.7	6.850	110.6	4.2500	111.1	15.000	108.9
1893	11.000	104.2	6.850	110.6	4.2500	111.1	15.000	108.9
1894	11.000	104.2	6.000	96.9	3.5000	91.5	14.250	98.7
1895	9.950	94.3	6.000	96.9	3.5000	91.5	14.250	98.7
1896	8.750	82.9	6.000	96.9	3.5000	91.5	13.800	95.6
1897	8.750	82.9	5.000	80.7	3.5000	91.5	13.800	95.6
1898	10.000	94.7	5.125	82.7	3.3130	86.6	13.800	95.6
1899	10.100	95.7	6.125	98.9	4.0420	105.7	14.450	100.1
1900	11.250	106.6	8.000	129.1	5.2080	136.1	15.600	108.1
1901	11.250	106.6	7.000	113.0	4.7500	124.2	15.600	108.1
1902	11.750	111.3	7.333	118.4	4.9167	128.5	15.600	108.1
1903	12.167	115.3	7.917	127.8	5.0000	130.7	15.600	108.1

Year.	House furnishing goods.							
	Glassware: nappies, 4-inch.		Glassware: pitchers, 1-gallon, common.		Glassware: tumblers, 1-pint, common.		Table cutlery: carvers, stag handles.	
	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per pair.	Relative price.
Average, 1890-1899..	\$0.112	100.0	\$1.175	100.0	\$0.1775	100.0	\$0.80	100.0
1890	.120	107.1	1.250	106.4	.1800	101.4	.80	100.0
1891	.120	107.1	1.250	106.4	.2000	112.7	.80	100.0
1892	.120	107.1	1.250	106.4	.1900	107.0	.80	100.0
1893	.120	107.1	1.250	106.4	.1900	107.0	.96	118.8
1894	.120	107.1	1.250	106.4	.1900	107.0	.80	100.0
1895	.120	107.1	1.250	106.4	.1850	104.2	.80	100.0
1896	.100	89.3	1.250	106.4	.1800	101.4	.80	100.0
1897	.100	89.3	1.000	85.1	.1700	95.8	.75	93.8
1898	.100	89.3	1.000	85.1	.1600	90.1	.75	93.8
1899	.100	89.3	1.000	85.1	.1800	101.4	.75	93.8
1900	.100	89.3	1.000	85.1	.1800	101.4	.75	93.8
1901	.140	125.0	1.300	110.6	.1800	101.4	.75	93.8
1902	.140	125.0	1.300	110.6	.1850	104.2	.75	93.8
1903	.140	125.0	1.300	110.6	.1767	99.5	.75	93.8

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[For a more detailed description of the articles see Table I.]

Year.	House furnishing goods.						Miscellaneous.	
	Table cutlery: knives and forks, coco-bolo handles.		Wooden ware: pails, oak-grained.		Wooden ware: tubs, oak-grained.		Cotton-seed meal.	
	Average price per gross.	Relative price.	Average price per dozen.	Relative price.	Average price per nest of 8.	Relative price.	Average price per ton of 2,000 pounds.	Relative price.
Average, 1890-1899..	\$6.06	100.0	\$1.2988	100.0	\$1.3471	100.0	\$21.9625	100.0
1890.....	7.75	127.9	1.5917	122.6	1.6500	122.5	23.3750	106.4
1891.....	7.75	127.9	1.4500	111.6	1.5667	116.3	25.2083	114.8
1892.....	6.85	113.0	1.3500	103.9	1.4000	103.9	23.6958	107.9
1893.....	5.50	90.8	1.3125	101.1	1.3083	97.1	25.7042	117.0
1894.....	5.50	90.8	1.2583	96.9	1.2875	95.6	22.5583	102.7
1895.....	5.50	90.8	1.1208	86.3	1.2500	92.8	18.9125	86.1
1896.....	5.50	90.8	1.2625	97.2	1.2500	92.8	19.9375	90.8
1897.....	5.00	82.5	1.2417	95.6	1.2500	92.8	20.4375	93.1
1898.....	5.50	90.8	1.1333	87.3	1.2500	92.8	19.0000	86.5
1899.....	5.75	94.9	1.2667	97.5	1.2583	93.4	20.7958	94.7
1900.....	5.75	94.9	1.4917	114.9	1.4417	107.0	25.5458	116.3
1901.....	6.50	107.3	1.5500	119.3	1.4500	107.6	25.0208	113.9
1902.....	6.50	107.3	1.5500	119.3	1.4500	107.6	27.1333	123.5
1903.....	6.50	107.3	1.5875	122.2	1.4500	107.6	28.7083	121.6

Year.	Miscellaneous.							
	Cotton-seed oil: summer yellow, prime.		Jute: raw.		Malt: Western made.		Paper: news.	
	Average price per gallon.	Relative price.	Average price per pound.	Relative price.	Average price per bushel.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	\$0.3044	100.0	\$0.0359	100.0	\$0.7029	100.0	\$0.0299	100.0
1890.....	.3446	113.2	.0388	108.1	.7500	106.7	.0382	127.8
1891.....	.3567	117.2	.0371	103.3	.9271	131.9	.0340	113.7
1892.....	.3088	101.4	.0475	132.3	.8015	114.0	.0340	113.7
1893.....	.4550	149.5	.0346	96.4	.7750	110.3	.0318	106.4
1894.....	.3238	106.4	.0345	96.1	.7446	105.9	.0323	108.0
1895.....	.2721	89.4	.0279	77.7	.6854	97.5	.0308	103.0
1896.....	.2513	82.6	.0319	88.9	.5629	80.1	.0275	92.0
1897.....	.2365	77.7	.0373	103.9	.5438	77.4	.0271	90.6
1898.....	.2288	75.2	.0332	92.5	.6163	87.7	.0219	73.2
1899.....	.2603	87.5	.0365	101.7	.6221	88.5	.0209	69.9
1900.....	.3556	116.8	.0435	121.2	.6538	93.0	.0281	94.0
1901.....	.3571	117.3	.0400	111.4	.7450	106.0	.0226	75.6
1902.....	.4067	133.6	.0438	122.0	.7925	112.7	.0242	80.9
1903.....	.3977	130.7	.0464	129.2	.7246	103.1	.0258	84.6

Year.	Miscellaneous.							
	Paper: wrapping, manila.		Proof spirits.		Rope: manila, ½-inch.		Rubber: Para Island.	
	Average price per pound.	Relative price.	Average price per gallon.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	\$0.0553	100.0	\$1.1499	100.0	\$0.0934	100.0	\$0.8007	100.0
1890.....	.0575	104.0	1.0533	91.6	.1494	160.0	.8879	104.6
1891.....	.0575	104.0	1.1052	96.1	.1088	111.1	.7908	98.8
1892.....	.0558	100.9	1.0757	93.5	.1148	122.9	.6763	84.5
1893.....	.0579	104.7	1.0713	93.2	.0919	98.4	.7167	89.5
1894.....	.0546	105.6	1.1325	98.5	.0770	82.4	.6744	84.2
1895.....	.0544	106.0	1.2109	105.3	.0735	78.7	.7425	92.7
1896.....	.0588	106.3	1.2031	104.6	.0664	71.1	.8000	99.9
1897.....	.0588	106.3	1.1830	102.9	.0631	67.6	.8454	105.6
1898.....	.0459	83.0	1.2220	106.3	.0842	90.1	.9271	115.3
1899.....	.0438	79.2	1.2421	108.0	.1094	117.1	.9854	124.8
1900.....	.0490	86.8	1.2460	108.4	.1320	141.3	.9817	122.6
1901.....	.0502	90.8	1.2861	111.8	.1092	116.9	.8495	106.1
1902.....	.0497	89.9	1.3138	114.3	.1348	144.3	.7273	90.8
1903.....	.0526	95.1	1.2809	111.4	.1146	122.7	.9064	113.1

a ½-inch.

TABLE IV.—BASE PRICES (AVERAGE FOR 1890-1899), AND AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Concluded.

[For a more detailed description of the articles see Table I.]

Year.	Miscellaneous.							
	Soap: castile, mottled, pure.		Starch: laundry.		Tobacco: plug, Horseshoe.		Tobacco: smoking, granulated, Seal of N. C.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	\$0.0669	100.0	\$0.0348	100.0	\$0.3962	100.0	\$0.5090	100.0
1890.....	.0694	104.4	.0371	106.6	.4050	102.2	.5000	98.2
1891.....	.0821	109.1	.0426	122.4	.4008	101.2	.5000	98.2
1892.....	.0824	109.7	.0373	107.2	.3725	94.0	.5000	98.2
1893.....	.0615	108.1	.0366	105.2	.3967	100.1	.5000	98.2
1894.....	.0588	103.3	.0366	105.2	.4000	101.0	.5000	98.2
1895.....	.0507	89.1	.0363	104.3	.4000	101.0	.5000	98.2
1896.....	.0502	88.2	.0310	89.1	.3806	96.1	.5000	98.2
1897.....	.0531	93.3	.0300	86.2	.3758	94.9	.5000	98.2
1898.....	.0550	96.7	.0300	86.2	.4133	104.3	.5300	104.1
1899.....	.0558	98.1	.0300	86.2	.4175	105.4	.5600	110.0
1900.....	.0613	107.7	.0340	97.7	.4433	111.9	.5600	110.0
1901.....	.0655	115.1	.0363	104.3	.4658	117.6	.5600	110.0
1902.....	.0663	116.5	.0454	130.5	.4542	114.6	.5592	109.9
1903.....	.0658	115.6	.0431	123.9	.4500	113.6	.5700	112.0

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Farm products.									
	Cotton: upland, middling.	Flax-seed: No. 1.	Grain.					Hay: timothy, No. 1.	Hides: green, salted, packers, heavy native steers.	Hops: New York State, choice.
			Barley: by sample.	Corn: No. 2, cash.	Oats: cash.	Rye: No. 2, cash.	Wheat: contract grades, cash.	Average.		
1890.....	142.9	125.5	111.6	103.8	115.6	103.0	118.9	110.6	96.8	148.0
1891.....	110.8	97.1	134.5	151.0	144.1	157.6	128.1	143.1	117.8	149.1
1892.....	99.0	91.4	112.2	118.3	113.2	127.7	104.9	115.3	113.5	141.4
1893.....	107.2	97.7	103.3	104.2	105.2	92.6	90.1	99.1	107.4	128.2
1894.....	90.2	121.6	113.2	113.7	115.7	88.1	74.4	101.0	99.9	85.5
1895.....	94.0	111.8	94.8	104.0	88.3	91.2	79.9	91.6	109.1	53.1
1896.....	102.0	72.9	65.7	67.8	67.0	66.5	85.4	70.5	99.0	49.5
1897.....	92.2	78.1	71.2	66.9	67.9	74.9	105.8	77.3	80.9	65.5
1898.....	76.9	99.8	85.9	82.6	91.9	93.8	117.8	96.4	79.9	91.5
1899.....	84.7	104.0	97.6	87.6	91.2	104.4	94.7	95.1	96.6	88.3
1900.....	123.8	145.7	106.2	100.2	84.5	97.9	93.7	96.5	110.9	83.7
1901.....	111.1	145.8	129.8	130.6	118.3	100.8	95.7	115.0	123.0	97.1
1902.....	115.1	135.0	139.4	156.9	147.3	102.5	98.7	129.0	120.9	134.1
1903.....	144.7	94.1	121.2	121.1	131.7	97.5	105.1	115.3	119.2	159.5

Year.	Farm products.									
	Live stock.									
	Cattle.			Hogs.			Sheep.			Average, farm products.
	Steers, choice to extra.	Steers, good to choice.	Average.	Heavy.	Light.	Average.	Native.	Western.	Average.	
1890.....	91.5	87.4	89.5	89.6	88.8	89.2	120.5	118.0	119.3	110.0
1891.....	110.6	107.7	109.2	100.2	98.2	99.2	120.0	115.6	117.8	121.5
1892.....	95.7	95.0	95.4	116.8	114.6	115.7	127.2	123.2	125.2	111.7
1893.....	103.8	102.2	103.0	148.4	148.7	148.6	103.2	104.3	103.8	107.9
1894.....	97.0	95.6	96.3	112.7	111.6	112.2	71.7	75.4	73.6	96.9
1895.....	103.1	104.2	103.7	97.0	96.2	96.6	78.5	78.3	78.4	92.3
1896.....	86.4	90.2	88.3	76.1	80.5	78.3	78.0	79.4	78.7	78.3
1897.....	98.2	100.8	99.5	81.4	84.2	82.8	93.1	96.3	94.2	85.2
1898.....	101.1	108.2	102.2	96.2	85.0	85.6	104.4	105.3	104.9	97.5
1899.....	112.6	113.7	113.2	91.5	92.1	91.8	108.3	106.2	104.3	100.0
1900.....	108.7	113.9	111.3	115.2	115.7	115.5	109.7	114.8	112.0	109.5
1901.....	115.1	118.1	116.6	135.0	133.9	134.5	89.2	94.7	92.0	116.9
1902.....	140.4	128.5	139.5	158.0	152.4	155.2	100.6	105.7	103.2	130.5
1903.....	104.7	106.9	105.8	137.3	137.0	137.2	98.7	98.0	98.4	113.6

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Food, etc.								
	Beans: medium, choice.	Bread.							
		Crackers.			Loaf.				Average.
		Boston X.	Soda.	Average.	Washing- ton mar- ket.	Home- made (N. Y. mar- ket).	Vienna (N. Y. market).	Average.	
1890....	121.5	104.0	111.4	107.7	100.5	101.0	101.0	100.8	108.6
1891....	134.9	104.0	111.4	107.7	100.5	101.0	101.0	100.8	108.6
1892....	112.0	102.2	106.3	104.3	100.5	101.0	101.0	100.8	102.2
1893....	119.2	96.6	104.5	100.6	100.5	101.0	101.0	100.8	100.7
1894....	110.6	96.6	101.0	98.8	105.5	101.0	101.0	100.8	100.0
1895....	107.2	97.2	94.0	96.6	94.2	101.0	101.0	98.7	97.5
1896....	70.3	96.6	91.6	94.1	102.5	90.4	90.4	94.4	94.3
1897....	62.6	88.0	82.5	85.3	100.5	101.0	101.0	100.8	94.6
1898....	74.7	108.9	105.6	107.3	100.5	101.0	101.0	100.8	108.4
1899....	87.0	106.9	92.3	99.1	100.5	101.0	101.0	100.8	100.1
1900....	126.6	111.4	94.0	102.7	100.5	101.0	101.0	100.8	101.6
1901....	131.3	118.9	97.5	108.2	100.5	101.0	101.0	100.8	108.8
1902....	115.0	118.9	97.5	108.2	100.5	101.0	101.0	100.8	108.8
1903....	135.5	112.6	90.0	101.3	100.5	101.0	101.0	100.8	101.0

Year.	Food, etc.											
	Butter.				Cheese: New York State, full cream.	Coffee: Rio No. 7.	Eggs: new- laid, fancy, near- by.	Fish.				
	Cream- ery, Elgin (Elgin mar- ket).	Cream- ery, extra (New York mar- ket).	Dairy, New York State.	Aver- age.				Cod, dry, bank, large.	Her- ring, shore, round.	Mack- erel, salt, large No. 3s.	Salmon, canned.	Aver- age.
1890....	103.1	101.5	96.5	100.4	97.1	136.6	99.1	101.7	93.3	129.2	111.4	108.9
1891....	115.3	115.3	117.6	116.1	102.4	127.3	110.0	120.5	124.6	106.4	101.8	113.8
1892....	116.5	116.5	116.1	116.4	107.2	108.9	110.4	126.3	77.8	92.0	100.7	99.2
1893....	118.9	120.5	124.6	121.3	109.0	131.2	114.5	114.2	101.0	92.0	101.4	102.2
1894....	101.1	102.1	108.3	102.2	107.4	126.0	93.5	106.7	89.9	78.2	96.7	92.9
1895....	96.1	96.3	93.0	94.5	94.1	121.2	102.0	98.9	83.6	110.6	102.1	98.8
1896....	82.6	82.1	82.3	82.3	92.0	93.9	88.7	75.4	89.8	98.5	106.2	92.0
1897....	84.7	84.5	83.2	84.1	98.1	60.4	87.6	80.9	96.3	86.5	90.8	88.6
1898....	86.9	87.2	86.4	86.8	83.3	48.2	92.6	83.6	111.4	96.7	86.0	94.4
1899....	96.6	94.8	97.1	95.8	108.9	46.0	101.6	92.0	133.2	107.9	108.8	109.2
1900....	100.4	100.1	104.5	101.7	114.3	62.6	100.7	94.9	134.6	98.3	120.2	112.0
1901....	97.4	96.5	99.2	97.7	102.4	49.2	106.7	107.2	131.9	76.6	116.3	106.0
1902....	111.2	110.6	114.5	112.1	114.1	44.6	122.7	91.2	129.9	97.3	109.6	107.0
1903....	106.1	104.7	106.2	106.7	128.3	42.6	128.2	106.0	151.7	123.5	110.0	122.6

Year.	Food, etc.								
	Flour.					Fruit.			
	Buck- wheat.	Rye.	Wheat.			Average.	Apples.		
			Spring patents.	Winter straights.	Average.		Evap- orated, choice.	Sun-dried, Southern, sliced.	Average.
1890....	104.0	101.4	120.7	121.0	120.9	111.8	134.1	134.0	134.1
1891....	125.7	148.3	123.5	127.6	125.6	131.3	129.9	180.2	145.1
1892....	92.1	121.1	101.1	107.2	104.2	105.4	81.2	82.1	81.7
1893....	121.9	93.0	93.2	85.4	89.3	98.4	109.4	95.6	104.0
1894....	125.4	63.8	83.7	71.5	77.6	91.1	128.9	122.5	125.7
1895....	86.2	94.5	84.8	84.0	84.4	87.4	80.0	93.4	88.7
1896....	71.1	80.9	88.3	94.1	91.2	83.6	62.9	80.6	61.8
1897....	75.4	84.6	106.8	113.4	110.1	95.1	65.5	51.8	63.7
1898....	79.8	92.9	110.1	107.3	109.0	97.7	105.1	77.3	91.2
1899....	113.4	99.4	87.8	86.0	87.9	98.4	102.6	118.4	110.5
1900....	103.8	103.3	89.4	87.1	88.8	97.0	72.6	86.0	79.3
1901....	108.4	100.1	88.7	86.0	87.4	95.8	68.7	78.6	81.7
1902....	115.1	103.8	88.6	80.7	89.7	99.6	105.7	98.4	100.6
1903....	119.6	94.9	100.8	98.4	97.1	102.2	72.1	88.9	93.0

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Food, etc.								
	Fruit.				Glucose: 41° and 42° mix- ing. (a)	Lard: prime contract.	Meal: corn.		
	Currents, in barrels.	Prunes, California, in boxes.	Raisins, California, London layer.	Average.			Fine white.	Fine. yellow.	Average.
1890.....	127.5	138.0	157.3	138.2	.....	96.8	101.2	100.8	100.8
1891.....	113.6	129.2	120.1	130.6	.....	100.9	140.6	143.4	142.0
1892.....	79.2	128.6	97.9	98.8	.....	117.9	113.7	114.2	114.0
1893.....	72.0	134.2	113.3	106.5	124.3	157.5	105.0	106.6	106.8
1894.....	46.1	96.0	76.9	93.9	111.4	118.2	106.7	104.5	105.6
1895.....	67.7	86.0	96.2	84.5	109.2	99.8	102.2	104.4	108.3
1896.....	87.2	75.1	67.9	70.7	81.7	71.7	77.5	77.2	77.4
1897.....	127.7	70.5	93.2	81.7	86.0	67.4	77.8	75.1	76.5
1898.....	154.7	70.3	92.7	100.0	91.8	84.4	84.1	83.2	83.7
1899.....	126.3	73.0	85.5	101.0	96.6	85.0	91.1	91.2	91.2
1900.....	192.0	67.4	101.3	103.9	104.9	105.5	96.5	97.4	97.0
1901.....	221.6	67.8	96.1	109.8	116.0	135.3	114.2	116.8	115.5
1902.....	131.7	71.2	112.3	104.5	153.6	161.9	146.4	150.0	148.2
1903.....	126.9	62.1	96.3	88.3	129.7	134.1	123.7	126.7	124.7

Year.	Food, etc.										
	Meat.										
	Beef.				Pork.				Mutton, dressed.	Average.	
	Fresh, native sides.	Salt, extra mess.	Salt, hams, West- ern.	Average.	Bacon, short clear sides.	Bacon, shortrib sides.	Hams, smoked.	Salt, mess, old to new.			
1890.....	89.2	86.8	80.4	85.5	89.3	89.3	101.1	104.4	96.0	123.7	96.5
1891.....	106.2	104.4	85.8	98.8	103.6	103.8	99.8	97.2	101.1	114.9	102.0
1892.....	98.8	84.8	80.5	88.0	116.6	116.5	109.3	99.1	110.4	121.2	103.4
1893.....	105.4	102.2	98.6	102.1	155.3	154.0	126.9	157.6	148.5	106.5	125.8
1894.....	97.0	101.0	101.5	99.8	111.3	112.2	103.6	121.4	112.1	80.2	103.5
1895.....	102.7	101.4	96.9	100.0	96.3	96.3	96.2	101.7	97.6	82.2	96.6
1896.....	90.5	93.7	88.1	90.8	73.2	73.0	95.8	76.8	79.7	82.9	84.3
1897.....	99.7	96.7	125.1	106.8	80.1	79.3	90.9	76.6	81.8	96.6	93.0
1898.....	101.3	114.2	118.8	111.4	88.3	90.5	82.0	84.8	86.4	98.0	97.2
1899.....	108.3	115.9	125.6	116.6	86.4	85.1	93.8	80.3	86.4	94.3	98.7
1900.....	104.3	121.7	114.2	113.4	111.4	111.6	104.2	107.5	108.7	96.4	108.9
1901.....	102.1	116.3	112.6	110.3	132.0	132.5	109.2	134.2	127.0	89.5	116.1
1902.....	125.9	147.1	118.0	130.3	159.0	159.5	123.1	154.2	149.0	97.9	135.6
1903.....	101.7	113.1	117.2	110.7	142.1	143.0	129.2	143.1	139.4	98.7	123.5

Year.	Food, etc.									
	Milk: fresh.	Molasses: New Orleans, open kettle, prime.	Rice: domes- tic, choice.	Salt.			Soda: bicar- bonate of, Ameri- can.	Spices.		
				Ameri- can.	Ash- ton's.	Average.		Nut- megs.	Pepper, Singa- pore.	Starch: pure corn.
1890....	103.1	112.4	107.8	112.5	111.9	112.2	131.6	146.2	153.7	99.6
1891....	104.7	88.5	113.5	111.7	108.1	109.9	151.7	140.7	116.6	109.5
1892....	105.1	101.2	101.4	107.5	107.8	107.7	104.3	123.1	92.0	109.5
1893....	109.4	106.2	81.8	99.6	105.5	102.6	136.4	106.1	79.4	109.5
1894....	103.1	98.1	93.8	102.1	101.6	101.9	128.2	92.5	68.9	103.6
1895....	99.2	97.8	95.0	99.6	93.0	96.3	84.7	91.8	66.4	101.1
1896....	91.8	103.0	92.5	88.4	93.0	90.7	72.7	83.1	66.8	93.6
1897....	92.2	83.1	96.6	93.9	93.0	93.5	71.8	77.6	88.7	91.2
1898....	93.7	97.8	108.4	94.4	93.0	98.7	61.7	72.7	119.0	91.2
1899....	99.2	111.9	108.2	90.4	93.0	91.7	56.0	66.4	149.1	91.2
1900....	107.5	151.5	97.7	142.1	93.0	117.6	58.9	60.2	172.4	91.2
1901....	102.7	120.1	97.7	121.6	99.0	110.3	51.2	54.3	172.5	85.8
1902....	112.9	115.5	99.6	90.3	101.0	95.7	51.7	46.9	167.6	80.3
1903....	112.9	112.5	100.9	87.2	102.0	94.6	61.7	66.6	172.1	92.5

a Average for 1893-1899=100.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Food, etc.										
	Sugar.				Tallow.	Tea: Formosa, fine.	Vegetables, fresh.			Vinegar: cider, Monarch.	Average, food, etc.
	89° fair refining.	96° centrifugal.	Granulated.	Average.			Onions.	Potatoes, Burbank.	Average.		
1890....	143.9	141.1	130.5	138.5	105.7	96.3	127.8	119.3	123.6	106.4	112.4
1891....	101.8	101.1	99.7	100.9	111.0	99.2	121.3	154.9	138.1	121.8	115.7
1892....	84.5	85.7	92.1	87.4	106.4	106.0	106.0	91.1	98.6	111.1	103.6
1893....	94.3	95.1	102.3	97.2	125.1	101.7	93.8	134.5	114.2	101.6	110.2
1894....	81.2	83.5	87.0	83.9	110.3	98.0	95.6	122.8	109.2	101.5	99.8
1895....	85.2	84.1	87.9	85.7	99.8	95.1	91.6	86.7	89.2	98.1	94.6
1896....	93.9	93.7	95.9	94.5	78.9	91.0	57.3	39.4	48.4	88.0	83.8
1897....	90.6	92.1	95.1	92.6	76.3	98.6	115.5	65.7	90.6	88.0	87.7
1898....	109.2	109.5	105.2	108.0	81.8	104.2	96.2	102.1	99.2	89.6	94.4
1899....	115.4	114.3	104.2	111.3	104.1	109.8	94.8	83.6	89.2	94.7	98.3
1900....	119.2	118.2	112.8	116.7	111.5	104.9	71.4	74.9	78.2	91.3	104.2
1901....	103.6	104.4	106.8	104.9	119.1	100.4	108.0	113.0	108.0	89.6	106.9
1902....	89.3	91.5	94.2	91.7	144.6	106.2	107.2	119.4	113.3	95.3	111.3
1903....	95.0	96.1	98.2	96.4	117.2	80.9	104.9	105.2	105.1	88.0	107.1

Year.	Cloths and clothing.									
	Bage: 2-bu., Amoskeag.	Blankets.				Boots and shoes.				
		11-4, all wool.	11-4, cotton warp, all wool filling.	11-4, cotton warp, cotton and wool filling.	Average.	Men's brogans, split.	Men's calf bal. shoes, Good-year welt.	Men's split boots, etc.	Men's vic' kid shoes, Good-year welt.	Women's solid grain shoes.
1890....	113.9	106.3	106.0	108.5	107.6	106.1	101.0	104.0	106.7	104.0
1891....	111.7	106.0	106.0	108.5	106.8	106.1	101.0	104.0	108.7	97.9
1892....	110.8	107.1	104.4	101.4	104.3	104.9	101.0	104.0	106.7	94.8
1893....	106.8	107.1	104.4	99.1	103.5	102.3	101.0	100.9	108.7	91.7
1894....	91.1	101.2	89.7	96.7	95.9	97.9	101.0	97.9	108.7	91.7
1895....	82.2	89.3	88.1	94.3	90.6	99.2	101.0	91.7	97.8	104.0
1896....	91.6	89.3	91.4	94.3	91.7	100.4	101.0	94.8	97.8	104.0
1897....	92.9	89.3	106.0	99.1	98.1	96.0	101.0	97.9	87.0	104.0
1898....	95.6	107.1	102.0	99.1	102.7	92.2	97.6	100.9	87.0	104.0
1899....	103.4	95.2	102.0	99.1	98.8	94.8	94.3	104.0	87.0	104.0
1900....	112.6	107.1	122.8	123.8	117.7	94.8	94.3	110.1	87.0	110.6
1901....	101.0	101.2	106.0	112.0	106.4	95.4	96.8	112.4	87.0	104.5
1902....	102.4	101.2	106.0	112.0	106.4	94.1	96.8	111.1	87.0	105.5
1903....	104.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	108.6

Year.	Cloths and clothing.								
	Broad-cloths: first quality, black, 54-inch, XXX wool.	Calico: Cochebo prints.	Carpets.				Cotton flannels.		
			Brussels, 5-frame, Bigelow.	Ingrain, 2-ply, Lowell.	Wilton, 5-frame, Bigelow.	Average.	24 yards to the pound.	34 yards to the pound.	Average.
1890....	113.7	117.5	103.1	106.6	104.2	106.3	123.9	119.7	121.8
1891....	113.7	104.0	112.7	116.2	109.4	112.8	123.9	119.7	121.8
1892....	113.7	117.5	108.1	106.1	104.2	104.5	118.7	113.0	115.9
1893....	113.7	113.0	98.3	111.1	104.2	104.5	102.7	100.0	101.4
1894....	91.2	99.5	98.5	98.5	104.2	98.7	95.6	95.7	95.7
1895....	79.7	94.9	93.5	88.4	91.1	91.0	92.1	91.8	91.7
1896....	79.7	94.9	93.5	85.9	91.1	90.2	92.1	95.7	93.9
1897....	96.2	90.4	95.9	90.9	93.8	93.5	81.4	95.7	88.6
1898....	96.2	81.4	103.1	98.5	99.0	100.2	81.4	80.5	81.0
1899....	96.2	87.3	103.1	96.0	99.0	99.4	87.7	88.3	88.0
1900....	108.0	94.9	108.1	108.5	101.6	102.7	104.5	98.6	101.6
1901....	110.3	90.4	108.1	101.0	101.6	101.9	90.7	100.0	95.4
1902....	110.3	90.4	108.5	101.9	102.5	102.5	92.1	100.0	98.1
1903....	110.3	91.1	108.7	108.1	108.9	108.6	104.1	108.4	108.3

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.								
	Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.	Cotton yarns.			Denims: Amos- keag.	Drillings.			Flannels: white, 4-4, Bal- lard Vale No. 3.
		Carded, white, mule- spun, Northern, cones, 10/1.	Carded, white, mule- spun, Northern, cones, 22/1.	Average.		Brown, Pep- perell.	30-inch, Stark A.	Average.	
1890....	101.6	111.3	112.1	111.7	112.5	119.4	122.8	121.1	116.8
1891....	100.7	111.6	114.0	112.8	109.6	114.0	115.2	114.6	116.8
1892....	100.7	117.2	116.8	117.0	109.6	101.7	102.7	102.2	115.9
1893....	100.7	112.4	108.6	110.5	112.5	108.1	108.1	106.6	109.5
1894....	100.7	94.7	91.2	93.0	105.4	97.7	96.4	97.1	94.1
1895....	100.7	91.9	92.2	92.1	94.6	92.6	93.9	98.2	81.7
1896....	99.6	92.2	98.7	98.0	94.6	100.2	100.2	100.2	85.4
1897....	98.4	90.3	90.8	90.6	89.2	91.8	88.9	90.4	82.6
1898....	98.4	90.5	91.0	90.8	85.9	89.7	83.9	86.8	97.8
1899....	98.4	87.6	89.4	88.5	85.8	89.2	87.7	88.5	99.5
1900....	120.1	115.0	115.9	115.5	102.8	105.9	104.0	105.0	108.7
1901....	120.1	98.6	97.9	98.3	100.2	102.3	102.1	102.2	100.8
1902....	120.1	95.6	92.4	94.0	100.6	100.5	108.5	102.0	105.8
1903....	120.1	116.2	109.5	112.9	108.0	108.2	111.5	109.9	114.3

Year.	Cloths and clothing.								
	Ginghams.			Horse blankets: 6 pounds each, all wool.	Hosiery.				
	Amos-keag.	Lancaster.	Average.		Men's cotton half hose, seamless, fast black, 20 to 22 oz.	Men's cotton half hose, seamless, 84 needles.	Women's combed Egyptian cotton hose, high spliced heel. (a)	Women's cotton hose, seamless, fast black, 26 to 28 oz.	Average.
1890.....	117.8	120.8	119.1	109.1	133.8	124.3	.....	131.6	129.7
1891.....	122.0	122.2	122.1	104.7	123.1	124.3	.....	121.1	122.8
1892.....	122.0	122.2	122.1	109.1	112.8	128.6	.....	115.8	117.4
1893.....	118.4	111.3	114.9	104.7	110.3	111.5	102.7	113.2	109.4
1894.....	91.0	88.0	89.5	96.0	102.6	92.4	102.7	105.8	100.8
1895.....	87.4	86.6	87.0	92.5	94.9	89.2	101.4	92.1	94.4
1896.....	88.6	87.8	88.0	90.8	87.2	89.2	101.4	84.2	90.5
1897.....	82.2	86.2	84.2	99.6	82.1	82.9	100.0	81.6	86.7
1898.....	80.9	85.2	83.1	99.5	76.9	82.9	97.3	76.3	83.4
1899.....	89.5	89.9	89.7	94.2	76.9	79.7	94.6	78.9	82.5
1900.....	96.6	96.0	96.3	118.7	82.1	82.9	102.7	81.6	87.3
1901.....	91.9	92.7	92.3	109.9	71.8	92.4	108.1	71.1	85.9
1902.....	98.1	100.3	99.2	109.9	76.9	85.0	100.0	78.9	85.2
1903.....	103.2	100.8	101.8	117.8	82.1	90.0	101.4	86.8	90.1

Year.	Cloths and clothing.							
	Leather.				Linen thread.			
	Harness, oak.	Sole, hemlock, non-acid, Buenos Ayres.	Sole, oak.	Wax calf, 30 to 40 lbs. to the dozen, B grade.	Average.	Shoe, 10s, Barbour.	3-cord, 200-yard spools, Barbour.	Average.
1890....	99.3	99.1	112.1	91.7	100.6	101.9	104.6	108.3
1891....	99.6	95.8	109.4	98.8	100.9	101.9	93.2	97.6
1892....	91.4	89.1	101.7	105.9	97.0	101.9	94.1	98.0
1893....	92.7	92.6	103.6	95.9	96.9	102.8	97.5	100.2
1894....	87.8	88.4	97.5	92.3	91.5	105.0	99.9	102.5
1895....	111.5	106.9	101.7	112.0	108.0	97.3	99.9	98.6
1896....	98.6	97.0	87.0	98.3	95.2	97.3	99.9	98.6
1897....	98.9	104.8	91.6	94.1	96.1	97.3	101.8	99.6
1898....	109.1	109.8	95.5	103.3	104.4	97.3	104.6	101.0
1899....	116.0	116.2	99.9	105.0	109.3	97.3	104.6	101.0
1900....	116.8	128.4	107.3	98.0	113.2	101.5	104.6	108.1
1901....	114.7	127.6	104.8	95.0	110.8	101.9	104.6	108.3
1902....	114.7	122.1	113.0	100.9	112.7	101.9	104.6	108.3
1903....	114.3	116.9	111.3	105.4	112.0	96.7	98.2	97.5

a Average for 1893-1899=100.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.						Print cloths: 28-inch, 64 x 64.	Shawls: standard, all wool, 72 x 144 in., 42-oz.
	Overcoatings.							
	Beaver, Moscow, all wool, black.	Chinchilla, B-rough, all wool.	Chinchilla, cotton warp, C. C. grade.	Covert cloth, light weight, staple.	Kersey, standard, 27 to 28 oz. (a)	Aver- age.		
1890....	116.7	113.4	109.1	105.7	.....	111.2	117.7	107.0
1891....	116.7	113.4	107.7	105.7	.....	110.9	108.5	107.0
1892....	116.7	113.4	109.1	105.7	.....	111.2	119.3	107.0
1893....	111.7	108.5	109.9	105.7	.....	109.0	114.6	107.0
1894....	96.5	92.8	96.9	104.2	.....	97.4	96.8	107.0
1895....	84.9	87.7	92.3	99.9	.....	91.2	100.9	107.0
1896....	84.9	87.7	89.2	87.4	.....	87.3	90.9	89.1
1897....	84.9	87.7	93.7	83.6	94.9	89.0	87.6	89.5
1898....	89.4	97.7	98.3	97.2	104.2	97.4	72.6	90.2
1899....	98.7	97.7	93.9	104.9	100.9	99.2	96.3	89.1
1900....	120.1	116.7	100.2	101.4	126.3	112.9	108.6	107.0
1901....	108.1	97.7	90.8	97.2	120.3	102.4	99.3	107.0
1902....	106.1	97.7	92.3	97.2	120.3	102.7	108.9	107.0
1903....	117.8	103.1	92.8	94.0	126.3	106.7	118.3	107.0

Year.	Cloths and clothing.									
	Sheetings.									
	Bleached.				Brown.					Average.
	10-4, At- lantic.	10-4, Pepper- ell.	10-4, Wam- sutta S. T.	Aver- age.	4-4, At- lantic A.	4-4, In- dian Head.	4-4, Pep- perell R.	4-4, Stark A. A.	Aver- age.	
1890.....	122.1	116.2	106.0	114.8	121.0	115.8	116.2	125.7	119.7	117.6
1891.....	116.4	106.6	107.2	110.1	118.1	116.1	108.3	113.1	113.9	112.3
1892.....	106.7	100.8	99.8	103.1	106.7	103.5	103.3	103.8	104.3	103.8
1893.....	111.8	103.3	103.6	106.2	111.9	108.5	105.8	109.3	108.9	107.7
1894.....	94.8	92.5	93.5	93.6	99.3	95.5	96.4	99.2	97.6	95.9
1895.....	93.8	94.7	92.2	93.6	94.0	93.5	96.0	97.7	95.3	94.6
1896.....	92.6	95.1	99.2	95.6	96.7	99.4	101.3	97.3	98.7	97.4
1897.....	87.4	92.3	99.2	93.0	88.6	93.9	95.3	86.1	91.0	91.8
1898.....	83.2	91.3	99.2	91.2	80.1	86.3	86.2	80.8	83.4	86.7
1899.....	89.4	107.3	100.1	96.9	84.8	86.9	91.5	85.9	87.2	92.2
1900.....	111.3	121.7	104.8	112.4	100.4	99.5	107.4	96.8	101.0	105.9
1901.....	100.9	112.4	99.2	104.2	98.0	100.8	107.4	94.1	100.1	101.8
1902.....	104.4	111.5	99.2	105.0	99.3	99.8	103.3	^b 92.6	96.8	101.4
1903.....	115.7	120.8	108.0	113.2	115.0	108.8	108.7	^b 101.9	108.6	110.6

Year.	Cloths and clothing.								
	Shirtings: bleached.					Silk: raw.			
	4-4, Fruit of the Loom.	4-4, Hope.	4-4, Lonsdale.	4-4, New York Mills.	4-4, Wam- utta X ^O XX	Average.	Italian, classical.	Japan, flatures.	Average.
1890....	116.1	115.2	116.2	110.5	106.6	112.9	122.7	130.5	126.6
1891....	109.8	111.6	113.1	110.2	106.4	110.2	98.4	99.8	99.1
1892....	111.0	105.2	111.7	106.3	102.6	107.4	105.3	107.7	106.5
1893....	114.3	113.2	114.4	105.6	103.5	110.2	118.2	113.0	115.6
1894....	99.9	98.4	100.0	101.0	100.2	99.9	86.5	83.7	85.1
1895....	96.2	96.5	95.9	97.1	102.2	97.6	94.9	94.2	94.6
1896....	95.6	96.4	94.2	101.0	100.3	97.9	85.3	84.8	85.1
1897....	88.0	91.1	87.1	95.4	98.6	92.0	85.5	86.2	85.9
1898....	80.2	82.2	81.8	89.5	85.1	83.8	91.1	90.5	90.8
1899....	88.5	87.5	86.1	82.8	94.1	87.8	112.1	109.7	110.9
1900....	103.4	106.5	100.6	89.7	101.8	100.4	106.0	103.7	104.9
1901....	103.0	111.0	101.5	86.8	92.3	98.9	90.4	87.4	88.9
1902....	103.8	107.3	101.9	87.4	93.4	98.8	96.5	96.1	96.8
1903....	105.4	107.1	103.9	97.0	102.7	103.2	106.3	102.9	104.6

^aAverage for 1897-1899=100.^bSheetings: brown, 4-4, Massachusetts Mills, Flying Horse brand. For method of computing relative price see pages 241 and 242.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Cloths and clothing.							Ticking: Amos- keag A. C. A.
	Suits.							
	Clay worsted diagonal, 12-oz., Wash. Mills. (a)	Clay worsted diagonal, 16-oz., Wash. Mills. (a)	Indigo blue, all wool, 54-inch, 14- ounce, Middlesex.	Indigo blue, all wool, 16- ounce.	Serge, Washing- ton Mills 6700. (b)	Trouserings, fancy worsted. (b)	Aver- age.	
1890.....			116.9	109.2			113.1	113.1
1891.....			116.9	109.2			113.1	110.7
1892.....			116.9	109.2	120.9	106.6	113.4	108.4
1893.....			114.0	109.2	120.9	106.6	112.7	111.3
1894.....			111.1	92.3	90.7	98.9	98.3	102.2
1895.....	92.5	93.8	87.1	83.0	90.7	87.9	89.2	94.8
1896.....	89.1	87.6	86.0	89.9	81.6	92.3	87.8	96.0
1897.....	92.2	93.3	79.1	87.4	87.7	92.3	88.7	91.9
1898.....	111.3	111.4	86.0	103.2	99.8	108.9	103.4	84.3
1899.....	114.9	113.9	86.0	107.2	107.7	106.6	106.1	87.0
1900.....	131.4	133.7	86.0	118.4	107.6	117.6	115.8	102.2
1901.....	110.6	111.0	89.6	109.2	106.6	102.2	104.9	95.5
1902.....	110.9	108.6	99.2	109.2	105.1	101.8	105.8	99.0
1903.....	115.2	112.1	108.8	112.6	100.4	104.6	109.0	104.1

Year.	Cloths and clothing.								Average.	
	Underwear.			Women's dress goods.						
	Shirts and drawers, white, all wool, etc.	Shirts and drawers, white, merino, 52½ wool, etc.	Aver- age.	Alpaca, cotton warp, 22-inch, Hamil- ton.	Cash- mere, all wool, 10-11 twill, 38-in., Atlantic J.	Cash- mere, cotton warp, 9-twll, 4-4, Atlantic F.	Cash- mere, cotton warp, 22-inch, Hamil- ton.	Cash- mere, cotton warp, 27-inch, Hamil- ton.		Frank- lin sack- ings, 6-4.
1890.....	106.2	106.9	106.6	108.1	119.8	119.3	109.9	111.0	115.3	113.9
1891.....	110.0	112.7	111.4	108.1	126.1	119.3	109.9	111.0	119.9	115.7
1892.....	110.0	112.7	111.4	106.3	128.2	117.7	108.3	109.6	119.9	115.0
1893.....	110.0	112.7	111.4	104.6	111.8	98.4	106.7	106.1	117.6	107.5
1894.....	92.7	95.4	94.1	100.9	84.3	88.7	100.3	102.7	96.8	95.6
1895.....	92.7	92.5	92.6	93.7	81.0	83.8	97.0	95.8	84.3	89.3
1896.....	92.7	92.5	92.6	93.7	67.5	83.6	93.8	98.0	80.7	87.0
1897.....	92.7	92.5	92.6	93.7	82.2	90.3	90.5	88.8	82.2	88.0
1898.....	92.7	95.4	94.1	93.7	88.6	94.3	90.5	88.8	88.4	90.7
1899.....	100.4	86.7	93.6	96.6	110.4	104.8	93.1	93.0	94.9	98.8
1900.....	100.4	95.4	97.9	104.6	119.1	108.0	100.3	99.9	118.3	108.4
1901.....	100.4	95.4	97.9	104.6	111.3	104.3	100.3	102.7	104.5	104.6
1902.....	100.4	95.4	97.9	103.7	111.3	108.0	99.5	102.0	108.3	105.5
1903.....	100.4	95.4	97.9	101.5	114.3	110.5	97.8	101.2	114.5	106.6

Year.	Cloths and clothing.							Average, cloths and clothing.
	Wool.			Worsted yarns.				
	Ohio, fine fleece (X and XX grade), scoured.	Ohio, med- ium fleece (1 and 1 grade), scoured.	Average.	2-40s, Aus- tralian fine.	2-40s, XXX, white, in skeins.	Average.		
1890.....	129.5	134.6	132.1	120.4	124.1	122.3	113.5	
1891.....	124.1	127.5	125.8	121.3	125.4	123.4	111.8	
1892.....	110.7	115.6	113.2	119.6	114.8	117.2	109.0	
1893.....	102.0	101.2	101.6	111.4	107.6	109.5	107.2	
1894.....	80.5	77.6	79.1	91.3	91.2	91.3	96.1	
1895.....	68.2	71.9	70.1	72.9	75.1	74.0	92.7	
1896.....	71.3	69.8	70.6	71.2	74.5	72.9	91.8	
1897.....	89.7	87.6	88.7	83.6	81.3	82.5	91.1	
1898.....	111.3	105.3	108.3	101.2	99.7	100.5	98.4	
1899.....	112.8	108.8	110.8	107.1	106.3	106.7	95.7	
1900.....	119.3	116.0	117.7	118.3	118.5	118.4	108.8	
1901.....	98.7	94.5	96.6	102.2	102.1	102.2	101.0	
1902.....	104.4	97.2	100.8	110.3	110.1	111.7	102.0	
1903.....	118.5	102.1	110.3	115.6	120.4	118.0	106.6	

a Average for 1890-1899=100.

b Average for 1892-1899=100.

c Designated as XXXX.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Candles: ada-man-tine, 6s, 14-oz.	Fuel and lighting.									
		Coal.									
		Anthracite.					Bituminous.				
		Broken.	Chest-nut.	Egg.	Stove.	Average.	Georges Creek (at mine).	Georges Creek (f. o. b. N. Y. Harbor).	Pitts-burg (Young-hio-gheny).	Average.	Average.
1890....	102.3	103.5	93.3	100.6	97.8	98.8	97.1	108.9	103.3	103.1	100.6
1891....	102.3	102.3	96.7	104.4	101.6	101.3	106.9	110.5	122.7	113.4	106.4
1892....	102.3	107.4	109.7	110.8	109.4	109.3	101.3	106.9	116.5	106.2	108.9
1893....	112.9	105.8	115.9	107.2	110.5	109.9	103.6	107.6	117.9	109.7	108.3
1894....	110.9	101.6	96.9	94.3	94.9	97.3	92.4	99.8	98.6	96.9	97.1
1895....	106.7	97.6	82.9	84.3	82.4	86.8	87.2	102.5	98.3	94.3	90.0
1896....	106.7	97.1	96.9	96.8	100.0	98.7	101.3	97.1	89.1	95.8	97.5
1897....	96.3	96.4	103.9	105.7	105.8	103.0	93.8	89.0	88.6	90.5	97.6
1898....	78.4	95.4	96.8	100.2	100.1	98.6	102.7	79.3	87.9	90.0	94.9
1899....	78.4	93.1	101.4	93.8	97.6	96.5	113.9	98.4	82.6	98.3	97.3
1900....	135.4	97.1	106.9	99.7	104.0	102.4	135.0	106.0	117.0	119.3	109.7
1901....	140.7	105.6	120.4	112.9	113.9	113.2	150.5	106.6	117.0	124.7	118.1
1902....	140.7	110.4	124.0	121.5	117.6	118.4	239.1	148.0	122.4	169.8	140.4
1903....	127.4	126.2	134.2	134.3	127.1	130.5	269.6	161.8	143.9	191.8	156.7

Year.	Fuel and lighting.							
	Coke: Con-nellsville, furnace.	Matches: parlor, domestic.	Petroleum.					Average, fuel and lighting.
			Crude.	Refined.			Average.	
				For export.	150° fire test, w. w.	Average.		
1890....	122.7	111.5	96.4	112.9	111.8	112.4	106.7	104.7
1891....	110.4	99.6	73.6	105.5	98.8	102.2	92.6	102.7
1892....	106.6	99.6	61.1	93.8	89.2	91.5	81.4	101.1
1893....	87.1	99.6	70.3	80.4	81.5	81.0	77.4	100.0
1894....	62.3	94.9	92.2	79.4	81.5	80.5	84.4	92.4
1895....	78.0	96.1	149.2	109.6	108.6	106.6	120.8	98.1
1896....	110.4	99.6	129.5	108.2	116.7	112.5	118.1	104.3
1897....	95.2	99.6	86.5	92.0	101.1	96.6	93.2	96.4
1898....	98.8	99.6	100.2	96.8	102.1	99.5	99.7	95.4
1899....	128.7	99.6	142.1	121.9	114.0	118.0	126.0	106.0
1900....	155.8	99.6	148.5	131.6	133.5	132.6	137.9	120.9
1901....	115.6	99.6	132.9	115.4	123.1	119.3	123.8	119.5
1902....	158.2	90.1	136.9	118.1	124.6	118.8	124.5	134.3
1903....	171.5	85.4	174.5	132.5	153.1	142.8	153.4	149.3

	Metals and implements.											
	Bar iron: best refined.				Builders' hardware.				Copper.			
Year.	From mill (Pitts- burg mar- ket).	From store (Phila. mar- ket).	Aver- age.	Barb wire: galvan- ized.	Butts: loose joint, cast, 3x3 in.	Door- knobs: steel, bronze plated.	Locks: com- mon mortise.	Aver- age.	Ingot, lake.	Sheet, hot- rolled (base sizes).	Wire, bare.	Aver- age.
1890....	126.9	125.0	126.0	141.2	111.7	97.8	101.6	103.7	127.6	137.1	128.1	130.9
1891....	117.9	115.9	116.9	127.4	111.7	97.8	101.6	103.7	105.8	114.5	112.7	111.0
1892....	113.1	114.0	113.6	109.5	96.8	97.8	101.6	96.7	93.5	96.4	98.2	96.0
1893....	108.4	103.7	103.6	99.7	98.4	97.8	101.6	99.3	88.6	90.4	92.2	90.4
1894....	82.8	81.7	82.3	86.1	95.9	97.8	100.1	97.9	76.8	85.9	79.0	80.6
1895....	86.2	87.8	87.0	88.9	100.3	115.1	102.0	105.8	87.1	85.9	84.6	85.9
1896....	84.1	85.4	84.8	77.7	104.1	102.1	106.1	104.1	89.9	85.9	92.6	89.1
1897....	75.9	79.9	77.9	71.3	96.8	97.8	102.0	98.9	91.7	88.2	93.9	91.3
1898....	73.8	78.0	75.9	72.7	92.4	97.8	91.8	94.0	96.8	84.4	93.9	91.7
1899....	134.5	126.2	130.4	125.5	92.4	97.8	91.8	94.0	143.2	131.1	124.7	133.0
1900....	148.8	119.5	133.9	134.4	126.6	106.8	96.5	110.0	134.6	124.6	123.0	127.4
1901....	124.1	112.2	118.2	120.2	116.8	112.0	91.8	106.9	136.7	125.9	124.0	128.5
1902....	133.8	129.9	131.9	116.9	126.6	126.9	104.0	119.2	97.3	107.5	80.6	98.5
1903....	122.1	122.0	122.1	108.4	126.6	132.6	110.2	123.1	110.9	115.6	102.3	106.6

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Metals and implements.								
	Lead: pig.	Lead pipe.	Nails.			Pig iron.			
			Cut, 8-penny, fence and common.	Wire, 8-penny, fence and common.	Average.	Bessemer.	Foundry No. 1.	Foundry No. 2.	Gray forge, Southern, coke.
1890.....	115.5	112.1	125.2	137.1	131.2	137.0	124.3	131.4	130.8
1891.....	116.7	116.2	100.3	114.1	107.2	115.8	118.4	117.9	112.9
1892.....	108.4	107.6	96.2	101.3	98.8	104.3	106.4	105.5	106.3
1893.....	98.2	103.8	92.0	92.1	92.1	93.4	98.1	96.3	95.9
1894.....	86.9	92.0	83.6	76.4	80.0	82.6	85.5	83.1	80.6
1895.....	85.6	87.2	105.3	98.0	101.7	92.3	88.5	89.4	93.1
1896.....	78.7	85.1	148.4	135.3	141.9	88.1	87.5	90.2	86.6
1897.....	94.0	89.6	72.9	68.7	70.8	78.5	81.7	77.4	79.4
1898.....	99.7	95.5	65.3	66.5	65.9	75.0	78.8	76.8	78.6
1899.....	117.6	111.0	110.8	110.4	110.6	138.1	130.8	132.9	135.8
1900.....	116.8	106.3	123.1	121.8	122.5	141.5	135.0	141.8	140.7
1901.....	115.0	104.8	115.6	109.4	112.6	115.7	107.2	112.8	113.2
1902.....	107.9	106.3	116.7	97.3	107.0	150.0	149.9	162.7	158.8
1903.....	112.5	107.8	120.2	96.0	108.1	137.7	134.5	146.6	141.3

Year.	Metals and implements.								
	Quick-silver.	Silver: bar, fine.	Spelter: Western.	Steel billets.	Steel rails.	Steel sheets: black, No. 27. (a)	Tin: pig.	Tin plates.	
								Domestic, Bessemer, coke, 14x20. (b)	Imported, Bessemer, coke, I.C., 14x20. (c)
1890.....	130.5	140.6	122.6	141.5	121.9	.....	115.5	.....	104.6
1891.....	112.3	132.2	112.4	117.7	114.8	.....	110.3	.....	116.4
1892.....	100.9	116.9	102.9	109.8	115.1	.....	110.9	.....	115.7
1893.....	93.2	104.4	90.7	94.9	107.9	.....	109.0	.....	117.1
1894.....	85.7	85.5	78.5	77.0	92.1	104.9	98.7	.....	106.7
1895.....	91.8	88.5	80.1	85.9	93.4	108.9	76.5	.....	84.4
1896.....	89.0	91.0	88.7	87.5	107.4	96.0	72.4	100.6	82.9
1897.....	92.2	81.1	98.1	70.1	71.9	87.1	74.0	98.2	85.1
1898.....	97.0	78.9	100.2	71.1	67.6	84.8	84.5	83.5	87.2
1899.....	107.3	80.8	130.1	144.6	107.9	119.2	148.2	122.7	(d)
1900.....	121.0	82.9	97.8	116.4	123.9	130.8	163.7	137.0	(d)
1901.....	118.5	79.7	89.6	112.1	104.9	140.6	142.6	122.7	(d)
1902.....	115.5	70.5	107.7	142.1	107.4	129.9	144.2	120.7	(d)
1903.....	113.4	72.4	123.5	129.7	107.4	116.1	153.4	115.4	(d)

Year.	Tools.							
	Augers: extra, 1-inch.	Axes: M. C. O., Yankee.	Chisels: extra, socket firmer, 1-inch.	Files: 8-inch mill bastard.	Hammers: Maydole No. 14.	Planes: Bailey No. 5.	Saws.	
							Crosscut, Disston.	Hand, Disston No. 7.
1890.....	118.2	120.4	110.9	106.7	96.9	107.4	100.0	112.7
1891.....	118.2	118.3	110.9	104.6	96.9	107.4	100.0	98.6
1892.....	118.2	106.5	110.9	102.2	96.9	107.4	100.0	98.6
1893.....	111.9	106.5	102.1	101.6	96.9	107.4	100.0	98.6
1894.....	95.9	100.9	91.5	97.3	96.9	104.8	100.0	98.6
1895.....	82.9	98.0	90.3	95.4	97.6	98.9	100.0	98.6
1896.....	86.7	88.4	94.7	91.2	105.2	93.0	100.0	98.6
1897.....	84.6	83.9	90.3	94.4	105.2	93.0	100.0	98.6
1898.....	88.6	79.9	90.8	96.8	100.6	93.0	100.0	98.6
1899.....	91.1	97.1	107.6	109.7	107.0	93.0	100.0	98.6
1900.....	124.4	102.9	127.6	127.8	115.9	107.0	100.0	98.6
1901.....	105.7	88.8	121.4	123.1	117.2	110.4	100.0	98.6
1902.....	111.9	103.0	142.6	123.1	117.2	114.2	100.0	98.6
1903.....	143.7	107.6	147.8	123.1	129.0	115.7	100.0	98.6

a Average for the period July, 1894, to December, 1899=100.

b Average for 1896-1899=100.

c Average for 1890-1898=100.

d No quotation for year.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Metals and implements.						
	Tools.				Wood screws: 1-inch, No. 10, flat head.	Zinc: sheet.	Average, metals and implements.
	Shovels: Ames No. 2.	Trowels: M. C. O., brick, 10½ inch.	Vises: solid box, 50- pound.	Average.			
1890....	100.1	100.0	106.1	107.2	130.5	114.0	119.2
1891....	100.1	100.0	106.1	106.6	132.5	107.7	111.7
1892....	100.1	100.0	109.1	104.6	139.1	103.4	106.0
1893....	100.1	100.0	107.6	103.0	139.1	94.0	100.7
1894....	94.7	100.0	104.0	98.6	103.2	74.4	90.7
1895....	94.7	100.0	97.2	95.3	74.0	85.1	92.0
1896....	99.3	100.0	96.4	96.7	68.4	93.0	93.7
1897....	100.8	100.0	89.7	95.0	66.3	93.0	86.6
1898....	100.8	100.0	84.1	93.9	60.8	103.5	86.4
1899....	109.4	100.0	100.7	101.3	96.2	131.9	114.7
1900....	115.9	100.0	109.4	111.8	120.5	114.8	120.5
1901....	115.9	100.0	128.7	110.0	69.2	104.7	111.9
1902....	118.9	100.0	131.5	114.6	63.0	107.9	117.2
1903....	102.0	100.0	132.7	118.2	72.4	113.3	117.6

Year.	Lumber and building materials.							
	Brick: common domestic.	Carbonate of lead: American, in oil.	Cement.			Doors: pine.	Lime: common.	Linseed oil: raw.
			Portland, domestic. (a)	Rosendale.	Average.			
1890....	118.0	110.6	.....	118.8	118.8	125.8	117.5	135.8
1891....	102.6	112.7	.....	106.2	106.2	114.4	109.5	106.8
1892....	103.7	114.0	.....	109.2	109.2	114.4	111.5	90.0
1893....	104.9	105.5	.....	100.0	100.0	112.1	111.5	102.2
1894....	89.9	90.8	.....	104.5	104.5	96.1	101.8	115.6
1895....	95.5	91.0	98.6	96.1	97.4	83.5	93.8	115.6
1896....	91.0	89.6	100.2	93.9	97.1	76.6	83.3	81.2
1897....	88.8	92.7	98.5	84.8	91.7	74.3	86.3	72.2
1898....	103.4	94.1	100.1	85.7	92.9	84.6	89.0	86.5
1899....	102.2	98.4	102.6	100.8	101.7	118.2	95.8	94.1
1900....	94.4	108.3	108.1	114.6	111.4	145.5	82.0	138.7
1901....	103.7	99.8	94.7	114.8	104.8	173.1	92.9	140.0
1902....	96.8	93.4	97.7	97.5	97.6	194.1	96.7	130.8
1903....	106.2	106.6	101.6	100.3	101.0	158.2	94.5	91.9

Year.	Lumber and building materials.									
	Lumber.									
	Hem- lock.	Maple: hard.	Oak: white.			Pine.				
			Plain.	Quar- tered.	Aver- age.	White, boards.			Yellow.	Average.
						No. 2 barn.	Uppers.	Aver- age.		
1890....	105.2	100.0	101.2	95.9	98.6	98.1	94.7	96.4	112.4	101.7
1891....	104.1	100.0	101.5	99.8	100.7	99.4	96.7	98.1	108.1	101.4
1892....	102.8	100.0	102.7	98.7	100.7	100.2	96.9	99.6	100.2	99.8
1893....	100.3	100.0	103.5	98.7	101.1	108.9	104.2	106.6	100.2	104.4
1894....	97.9	100.0	99.5	95.2	97.4	106.2	99.7	103.0	100.2	102.0
1895....	93.2	100.0	96.8	99.2	98.0	100.8	98.8	99.8	91.6	97.1
1896....	93.3	100.0	96.8	101.5	99.2	96.4	100.2	98.3	88.9	95.2
1897....	92.0	100.0	96.8	100.3	98.6	92.5	99.5	96.0	89.0	93.7
1898....	98.2	100.0	96.8	97.8	97.3	90.6	99.0	94.8	100.9	96.8
1899....	113.0	100.1	104.1	112.7	108.4	106.9	108.4	107.7	108.5	107.9
1900....	137.9	103.8	109.1	120.1	114.6	125.7	123.5	124.6	112.2	120.5
1901....	125.4	100.8	98.2	110.2	104.2	122.0	129.8	125.9	106.5	119.4
1902....	132.4	107.8	109.2	117.5	113.4	137.3	160.7	149.0	113.7	137.2
1903....	140.4	119.5	119.8	139.3	129.6	140.8	171.8	156.1	113.7	141.9

a Average for 1895-1899=100.

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Lumber and building materials.							
	Lumber.			Oxide of zinc.	Plate glass: polished, unaltered.			Resin: good, strained.
	Poplar.	Spruce.	Average.		Area 3 to 5 sq. ft.	Area 5 to 10 sq. ft.	Average.	
1890.....	97.2	113.5	102.0	106.3	146.0	134.9	140.5	96.1
1891.....	97.2	99.1	100.7	104.8	143.3	132.9	138.1	110.8
1892.....	97.4	108.5	100.5	106.5	115.7	106.0	110.9	101.9
1893.....	107.2	96.0	102.1	108.3	115.7	106.0	110.9	101.3
1894.....	101.2	88.6	98.7	98.3	90.9	86.7	88.8	99.4
1895.....	96.8	99.3	97.6	87.5	82.6	92.5	87.6	91.8
1896.....	96.8	99.3	97.2	96.8	93.7	104.0	96.9	91.8
1897.....	97.8	97.6	96.2	94.3	55.1	61.7	58.4	91.8
1898.....	95.6	95.8	97.2	99.0	74.4	82.9	78.7	91.8
1899.....	108.5	107.3	107.7	109.5	82.6	92.5	87.6	106.3
1900.....	120.2	121.1	119.3	112.8	93.7	104.0	98.9	120.3
1901.....	117.0	125.4	115.0	109.5	88.2	94.4	91.3	94.9
1902.....	134.2	134.2	127.4	110.0	70.9	79.2	75.1	121.5
1903.....	158.3	183.7	187.4	115.8	72.3	83.1	77.7	89.2

Year.	Lumber and building materials.							
	Shingles.			Tar.	Turpen- tine: spirits of.	Window glass: American, single.		
	Cypress.	White pine.	Average.			Firsts, 6 x 8 to 10 x 15 inch.	Thirds, 6 x 8 to 10 x 15 inch.	Average.
1890.....	118.7	102.6	110.7	122.4	122.0	103.6	98.2	100.9
1891.....	115.2	106.9	111.1	131.4	113.5	102.8	97.3	100.1
1892.....	111.7	104.4	108.1	107.9	96.5	92.7	87.7	90.2
1893.....	106.3	102.8	104.6	86.8	89.8	99.4	94.0	96.7
1894.....	99.2	100.2	99.7	90.6	87.7	92.6	89.8	91.2
1895.....	93.9	98.8	96.4	94.8	87.4	74.3	76.5	75.4
1896.....	88.6	96.5	92.6	84.0	82.1	83.8	88.0	85.9
1897.....	83.3	94.6	89.0	87.5	87.5	102.2	107.9	105.1
1898.....	88.6	94.9	91.8	91.1	96.4	122.9	128.8	125.9
1899.....	94.4	98.3	96.4	108.4	137.0	125.9	131.9	128.9
1900.....	101.0	106.9	104.0	113.1	142.7	125.5	127.5	126.5
1901.....	101.0	111.9	106.5	106.4	111.5	191.9	180.4	186.2
1902.....	94.7	123.0	108.9	110.0	141.8	149.6	141.0	145.3
1903.....	91.0	125.1	108.1	139.4	171.0	122.7	118.7	120.7

Year.	Drugs and chemicals.								
	Alcohol: grain, 94 per cent.	Alcohol: wood, refined, 95 per cent.	Alum: lump.	Brim- stone: crude, acconds.	Glycer- in: refined.	Muriatic acid: 20°.	Opium: natural, in cases.	Quinine: Ameri- can.	Sul- phuric acid: 66°.
1890.....	92.5	119.2	109.0	102.2	126.3	100.0	111.0	133.1	98.9
1891.....	96.9	121.6	94.6	138.2	109.9	94.2	82.4	102.0	91.0
1892.....	95.6	136.0	95.8	116.7	99.8	116.3	70.8	88.7	106.7
1893.....	97.3	135.4	104.2	90.5	96.2	97.1	101.3	87.4	95.5
1894.....	96.1	75.5	101.2	80.1	85.3	84.6	96.8	106.5	82.0
1895.....	104.0	90.9	95.8	75.5	86.1	79.8	78.0	102.0	78.7
1896.....	102.7	89.1	96.2	86.8	119.4	72.1	88.6	97.8	78.7
1897.....	101.6	72.9	99.4	97.2	93.5	104.8	99.2	74.3	106.7
1898.....	108.8	78.6	96.8	110.7	88.5	128.1	141.6	87.2	127.0
1899.....	107.6	80.8	100.6	102.1	95.0	129.8	180.2	120.9	134.8
1900.....	106.5	83.9	104.8	102.2	108.3	129.8	135.6	135.2	134.8
1901.....	109.7	64.2	104.8	106.3	107.5	144.2	186.8	123.0	140.4
1902.....	107.4	67.3	104.8	113.2	108.2	151.5	120.0	104.7	146.1
1903.....	106.9	62.0	103.6	107.9	108.4	153.8	180.6	102.6	142.7

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Continued.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	House furnishing goods.								
	Earthenware.				Furniture.				
	Plates, cream-colored.	Plates, white granite.	Teacups and saucers, white granite.	Average.	Bedroom sets, ash.	Chairs, bedroom, maple.	Chairs, kitchen.	Tables, kitchen.	Average.
1890....	108.0	109.1	109.6	108.9	113.7	113.0	109.8	103.9	110.1
1891....	106.6	106.9	107.4	106.6	113.7	113.0	109.8	103.9	110.1
1892....	102.3	103.7	104.2	103.4	113.7	110.6	111.1	103.9	109.8
1893....	102.3	103.7	104.2	103.4	104.2	110.6	111.1	103.9	107.5
1894....	101.0	101.9	102.8	101.9	104.2	96.9	91.5	98.7	97.8
1895....	94.6	92.9	94.4	94.0	94.3	96.9	91.5	98.7	96.4
1896....	92.0	89.1	90.1	90.4	82.9	96.9	91.5	96.6	91.7
1897....	92.0	89.1	90.1	90.4	82.9	80.7	91.5	96.6	87.7
1898....	100.4	100.8	98.0	99.7	94.7	82.7	86.6	96.6	89.9
1899....	101.7	102.9	99.2	101.3	95.7	98.9	106.7	100.1	100.1
1900....	106.6	108.1	104.3	106.3	106.6	129.1	136.1	108.1	120.0
1901....	112.5	113.8	109.7	112.0	106.6	113.0	124.2	108.1	113.0
1902....	112.5	113.8	109.7	112.0	111.3	118.4	128.5	108.1	116.6
1903....	115.4	111.4	107.4	111.4	115.3	127.8	130.7	108.1	120.5

Year.	House furnishing goods.										
	Glassware.				Table cutlery.			Wooden ware.			Average, house furnishing goods.
	Nap-pies, 4-inch.	Pitch-ers, 1-gallon, com-mon.	Tum-blers, 1-pint, com-mon.	Aver-age.	Carvers, stag handles.	Knives and forks, cocobolo handles.	Aver-age.	Pails, oak-grain-ed.	Tubs, oak-grain-ed.	Aver-age.	
1890....	107.1	106.4	101.4	105.0	100.0	127.9	114.0	122.6	122.5	122.6	111.1
1891....	107.1	106.4	112.7	108.7	100.0	127.9	114.0	111.6	116.3	114.0	110.2
1892....	107.1	106.4	107.0	106.8	100.0	113.0	106.5	108.9	103.9	103.9	106.5
1893....	107.1	106.4	107.0	106.8	118.8	90.8	104.8	101.1	97.1	99.1	104.9
1894....	107.1	106.4	107.0	106.8	100.0	90.8	95.4	96.9	96.6	96.3	100.1
1895....	107.1	106.4	104.2	105.9	100.0	90.8	95.4	86.3	92.8	89.6	96.5
1896....	89.3	106.4	101.4	99.0	100.0	90.8	95.4	97.2	92.8	95.0	94.0
1897....	89.3	85.1	95.8	90.1	93.8	82.5	88.2	95.6	92.8	94.2	89.8
1898....	89.3	85.1	90.1	88.2	93.8	90.8	92.3	87.3	92.8	90.1	92.0
1899....	89.3	85.1	73.2	82.5	93.8	94.9	94.4	97.5	93.4	95.5	95.1
1900....	89.3	85.1	101.4	91.9	93.8	94.9	94.4	114.9	107.0	111.0	106.1
1901....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3	107.6	113.5	110.9
1902....	125.0	110.6	104.2	113.3	93.8	107.3	100.6	119.3	107.6	113.5	112.2
1903....	125.0	110.6	99.5	111.7	93.8	107.3	100.6	122.2	107.6	114.9	113.0

Year.	Miscellaneous.							
	Cotton-seed meal.	Cotton-seed oil: summer yellow, prime.	Jute: raw.	Malt: Western made.	Paper.			Proof spirits.
					News.	Wrapping, manila.	Average.	
1890....	106.4	113.2	108.1	106.7	127.8	104.0	115.9	91.6
1891....	114.8	117.2	103.3	131.9	113.7	104.0	108.9	96.1
1892....	107.9	101.4	132.3	114.0	113.7	100.9	107.3	93.5
1893....	117.0	149.5	96.4	110.3	106.4	104.7	105.6	93.2
1894....	102.7	106.4	96.1	105.9	108.0	105.6	108.8	93.5
1895....	86.1	89.4	77.7	97.5	108.0	106.0	104.5	105.3
1896....	90.8	82.6	88.9	80.1	92.0	105.3	99.2	104.6
1897....	93.1	77.7	103.9	77.4	90.6	106.3	96.5	102.9
1898....	86.5	76.2	92.5	87.7	73.2	83.0	78.1	108.3
1899....	94.7	87.5	101.7	88.5	69.9	79.2	74.6	108.0
1900....	116.3	116.8	121.2	98.0	94.0	86.8	90.4	108.4
1901....	113.9	117.3	111.4	106.0	75.6	90.8	83.2	111.8
1902....	123.5	133.6	122.0	112.7	80.9	89.9	86.4	114.3
1903....	121.6	130.7	129.2	108.1	84.6	95.1	89.9	111.4

TABLE V.—RELATIVE PRICES OF COMMODITIES, 1890 TO 1903—Concluded.

[Average price for 1890-1899=100. For a more detailed description of the articles see Table I.]

Year.	Miscellaneous.						
	Rope: manila.	Rubber: Para Island.	Soap: castile, mottled, pure.	Starch: laundry.	Tobacco.		
					Plug, Horseshoe.	Smoking, granulated, Seal of N. C.	Average.
1890....	100.0	104.6	104.4	106.6	102.2	98.2	100.2
1891....	111.1	96.8	109.1	122.4	101.2	98.2	99.7
1892....	122.9	84.5	109.7	107.2	94.0	98.2	96.1
1893....	98.4	89.5	106.1	106.2	100.1	98.2	99.2
1894....	82.4	84.2	108.3	105.2	101.0	98.2	99.6
1895....	78.7	92.7	89.1	104.3	101.0	98.2	99.6
1896....	71.1	90.9	88.2	99.1	96.1	98.2	97.2
1897....	67.6	105.6	93.8	86.2	94.9	98.2	96.6
1898....	90.1	115.8	96.7	86.2	104.3	104.1	104.2
1899....	117.1	124.3	96.1	86.2	105.4	110.0	107.7
1900....	141.3	122.6	107.7	97.7	111.9	110.0	111.0
1901....	116.9	106.1	115.1	104.3	117.6	110.0	113.8
1902....	144.3	90.8	116.6	130.6	114.6	109.9	112.3
1903....	122.7	118.1	116.6	123.9	113.6	112.0	112.8
							110.8
							109.4
							106.2
							106.9
							99.8
							94.6
							91.4
							92.1
							92.4
							109.8
							107.4
							134.1
							113.6

THE UNION MOVEMENT AMONG COAL-MINE WORKERS.^(a)

By FRANK JULIAN WARNE, PH. D.

The first attempt to organize the coal-mine workers of the United States into a national union was made in 1861. It had its origin among a small group of miners who had emigrated from Great Britain to the Belleville district of Illinois. Prominent among these miners were Thomas Lloyd and Daniel Weaver, both Englishmen, who had been schooled in English labor unions and who had brought with them the ideas inculcated by that training. The object of the organization, as explained in an address to the miners of the United States issued by Weaver, was for "mutual protection, and improvement and education."

In response to this appeal, representatives of coal miners in Missouri and Illinois met in St. Louis in January, 1861, and organized the American Miners' Association, with Lloyd as president and Weaver as secretary. One of the principal objects of this association was to secure better mining laws in the different coal-producing States. The accomplishment of this object was materially aided by the "Avondale horror," which occurred in the anthracite fields of Pennsylvania in September of that year. The shocking death of 109 mine employees aroused widespread public sympathy with the miners' movement, of which the leaders in the organization took advantage. They succeeded in securing from the constitutional convention of Illinois, then in session, the insertion in the new constitution of a provision requiring the legislature to enact general mining laws for the safety of all persons working in the coal mines of the State. Such laws were later enacted by the legislature. The association also conducted a successful contest for mine inspection in Ohio. These successes brought to the organization a rapid growth in membership, and it spread within a short time over all the more important coal-producing States, becoming strongest in Missouri, Illinois, Ohio, and Maryland. It included among its members only bituminous coal-mine workers. The total annual output of soft coal in 1861 was

^aThe principal sources of information employed in preparing this article were official documents, files of the United Mine Workers' Journal, in particular the writings of Andrew Roy, files of other newspapers, and interviews with officers of the United Mine Workers and with operators and miners in both anthracite and bituminous coal regions.

estimated at 6,500,000 tons, and the total number of coal-mine workers in the entire country did not much exceed 30,000.

It was natural for the movement to lapse during the civil war, when much more momentous events demanded attention, and not unnatural that it should be affected by the disintegrating forces then at work. Strikes in nearly all the coal fields accompanied the general fall in prices following that great struggle, and these added to the already growing hostility of the public against labor organizations of all kinds. The open air meetings of the striking miners, which were not always peaceable and orderly, were denounced as lawless mobs, and the leaders were bitterly persecuted. Popular indignation was easily aroused at this time, and there was evidence of internal dissensions among the miners. These conditions were employed to sweep the association out of existence, and to all outward appearances the American Miners' Association now became a thing of the past.

The movement, however, simply assumed another form in the Miners and Laborers' Benevolent Association, which by 1870 had become conspicuous in Pennsylvania, West Virginia, Ohio, Indiana, and Illinois. This association had spread from the anthracite region of Pennsylvania, where it was at first known as the Workingmen's Benevolent Association. Under the leadership of John Siney, the anthracite mine workers had been led successfully through several strikes and had succeeded in building up a strong union. They had maintained wages during falling markets, even against the organized opposition of the operators, and had established cooperative stores; they owned and managed several influential newspapers, and exerted a strong influence in politics, having been so successful as to secure from the Pennsylvania legislature the first mine-inspection law passed in this country, which, however, did not apply to the bituminous region of that State. Such success for the hard-coal miner, while the soft-coal mine employee was in a most unenviable condition, naturally drew attention to its cause, and in consequence the name and work of John Siney became of national importance, as it was mainly through his leadership that the anthracite mine worker enjoyed his high estate.

The extension of the Workingmen's Benevolent Association into the soft-coal producing States at first took the form of independent organizations among the men who had been identified with the American Miners' Association. In 1873 John Siney was led to attempt the union of all these branches under a national organization, and in response to his call, issued to the mine workers of the United States, a meeting was held at Youngstown, Ohio, in October of that year. Representatives were present from Pennsylvania, Ohio, Indiana, Illinois, West Virginia, and one or two other States. In his call Siney stated three objects of the meeting as being: (1) A consolidation of the entire body of miners of the United States for the purpose of self-protection

(2) to afford pecuniary and moral support to such districts as may be forced to the alternative of a strike; and (3) for a thorough discussion of grievances and the passage of such laws in the several States as the safety and welfare of the mine workers demand.

The Youngstown meeting gave birth to the Miners' National Association, composed of soft-coal miners, with John Siney as its president, he having resigned his leadership of the anthracite mine workers to undertake the greater task. The constitution of the new organization provided for arbitration, conciliation, and cooperation, and for independent action in district affairs. No strike was to be begun until every other possible means of settlement had been exhausted, and before a strike should be entered upon a complete statement of the issues involved was to be made to the president of the organization and his consent to the proposed action secured. Provision was also made for an executive board, composed of one member from each State represented in the organization, to advise and assist the national officers. Headquarters of the association were established at Cleveland, Ohio.

Within two years the association had spread over all the central coal producing States, and had an estimated membership of nearly 35,000. There is no question that it was powerful and influential. It contemplated, among other things, the undertaking of cooperative coal mining on an extensive scale, and for this purpose a large tract of coal land was purchased in Tennessee. Even while at the height of its power the causes that led to its downfall are easily discernible. The panic of 1873 had been followed by a period of industrial depression which became most acute in its effect upon the coal trade in 1875. Glutted coal markets forced many of the mines to work on half time. Prices were falling. With less work to do and less pay for that which they did, the miners engaged in strike after strike to prevent reductions in wages. Now came the first fair test of the arbitration principle enunciated by the organization. It proved a dismal failure. This was at the close of 1874. It followed a notification from the operators in the Tuscarawas Valley (Ohio) of a reduction in the price of mining from 90 to 70 cents a ton and corresponding reductions in wages for other mine labor. An arbitration board was organized, according to the provision in the constitution of the Miners' National Association, with three miners and three operators as members, one of the operators being the late Senator Marcus A. Hanna. Judge Andrews, of Cleveland, was umpire. The decision was against the miners, the price of mining being fixed at 71 cents a ton. At first the employees continued at work, but soon petitioned their executive board to be released from the award, which was done. They then made a demand for an advance of 9 cents a ton in the mining rate. This was granted by the operators after a short suspension. To add to the deplorable situation the miners lacked confidence in their leaders at a time when confidence was most

needed. In consequence the experience of the American Miners' Association under somewhat similar circumstances was repeated, the Miners' National Association declined, internal dissensions weakened it, and finally, at the close of 1875, it was lost sight of.

In the meantime there had come into existence an association which was destined to preserve the germ of organization among the coal miners until they were again ready and able to undertake the task of uniting in one national body. This was the Knights of Labor, which Uriah S. Stephens had launched in 1870. Christopher Evans, now statistician for the United Mine Workers of America, is given credit for being the first to introduce this organization among the coal miners, having organized the first miners' assembly at New Straitsville, Ohio. At the beginning the growth of the Knights of Labor among the coal-mine workers was slow, but following 1879, when the force of the 1873 panic had about spent itself, it was much more rapid. The miners' branch was known as Trades Assembly No. 135, Knights of Labor, and had a district master workman at its head. Soon the assemblies were in a prosperous condition, due to the improved industrial situation, not a few of them owning the halls in which their meetings were held. Many of these halls contained small libraries, and the meetings gave opportunities for debates and general discussions of labor problems. As such, they proved valuable training schools from which have come a number of present-day labor leaders.

This period of prosperity found the Ohio miners under a strong State organization, with John McBride at their head. The miners of the Pittsburg district of Pennsylvania were also well organized, under the leadership of David R. Jones, a graduate of Mount Union College (Ohio), who had left the mines when 18 years of age to take up the study of law. He was in absolute control, there being no other officers. His salary was made up of monthly dues of five cents from each member. The efforts of these leaders at this time were directed toward securing higher wages for the mine workers to accompany rising prices, the strikes of this period nearly all being for increased wages. But there were other troublesome questions which the mine employees of the several States desired settled. Finally an interstate convention was held at Pittsburg in March, 1880, and the mine employees demanded of the operators payment by weight for all merchantable coal, an eight-hour work day, and the abolishment of the "pluck-me" store system. If these concessions were not granted by August of that year there was to be a general strike of soft-coal miners. In the meantime the mine employees of the Tuscarawas Valley in Ohio, who had gone out on strike against the continuance of the screen system of payment for coal mined, offered resistance to the importation of Negro laborers to take their places, which resulted in the State militia being called into the field under arms and finally

in the decision of the mine employees to return to work under old conditions. This prevented the general strike as planned by the Pittsburgh convention.

The decade which followed was one of rapid railroad development throughout the coal-producing States. The result was the breaking down of the local or sectional markets for the commodity as a greater coal area became accessible and the establishing of what was practically a national market for the product of all the widely separated coal fields. It was still true that certain districts supplied certain markets. The eastern West Virginia and the Maryland fields, the central Pennsylvania field, and the anthracite region sent their product largely to the markets in the northern tier of seaboard States, principally to Portland, Boston, New York, Philadelphia, and Baltimore. Western Pennsylvania and West Virginia, Ohio, Indiana, and Illinois coal went to the Lake and Northwestern States. The coal-producing area accessible to the Monongahela, Kanawha, and Ohio rivers—western Pennsylvania, Ohio, and West Virginia—still found its market in the South at Cincinnati, Louisville, Mobile, New Orleans, and lower Mississippi points, to which was also sent coal not only from Kentucky, Tennessee, and Alabama, but also from States west of the Mississippi River. That these different markets drew their coal supply from these particular fields rather than from any of the others was due to the natural conditions of river outlets and mountain barriers. This explains briefly how it was that coal fields, lying next to each other, separated perhaps by only a mountain ridge, had their markets thousands of miles apart, and also why coal fields widely separated sent their product to a common market.

With the rapid railroad development particular coal fields were now no longer dependent entirely upon certain markets, and particular markets could be made independent, if necessary, of certain coal fields. From West Virginia and Pennsylvania, principally along the Youghiogheny River, between the fields supplying the eastern seaboard and those sending their product to the Lakes and Northwest, coal could be sent either to the seaboard or to the lake markets. Into the eastern seaboard market coal could be brought from the Kentucky, Tennessee, and Alabama fields to compete with the Ohio, Pennsylvania, and West Virginia product. Again, the coal from these widely separated fields met in competition in the southern Ohio and Mississippi River markets, into which also came coal from States beyond the Mississippi. Coal produced in the Pittsburgh district of Pennsylvania, if conditions warranted it, could be taken on board cars at Cincinnati and shipped into the western and northwestern markets, where it would sell alongside coal from Iowa; or southern Illinois could send its coal to St. Louis or Chicago or even to the far Northwest. Thus the hitherto widely separated coal markets were being bound so closely together that the

least rise or fall in the price of that commodity in any of the sectional markets had its effect, directly and indirectly, upon the price of coal in all the others. If this price for any cause rose much higher in one market than in the others the supply at once called forth would reduce it nearly to a level with the price in the other markets. A recognition of this interdependence of the coal-producing States was forced upon those engaged in the industry by the sudden increase in coal production following the opening of so many new fields. A period of business depression set in, overproduction of coal resulted in falling prices and this was followed by reductions in wages and poor returns for the greater part of capital invested in the industry. Strike after strike in the coal fields indicated a deplorable state for both operators and miners.

"For the purpose of adjusting market and mining prices in such a way as to avoid strikes and lockouts, and give each party an increased profit from the sale of coal," a movement was inaugurated in September, 1885, at Indianapolis, by the National Federation of Miners and Mine Laborers. This organization had come into existence in that year mainly through the efforts of those mine workers who were opposed to the secret methods of the Knights of Labor. Christopher Evans of Ohio, was at its head. The movement contemplated a joint convention of operators and miners to provide a remedy for the wretched conditions. The credit for this idea is given to Daniel McLaughlin, of Illinois. In October, 1885, the first joint meeting was held in Chicago and was attended by operators and miners from Illinois, Indiana, Ohio and Pennsylvania. With the hope of securing representation from a larger number of States and Territories a committee of three operators and three miners was appointed to issue a public address, which should set forth the object and purpose of the movement, and another meeting was called for December in Pittsburg. This latter meeting although more largely attended than that held previously, adjourned without definite action on the questions involved, to meet again in February.

On February 23, 1886, at Columbus, Ohio, the first joint national convention of coal operators and miners was organized with Christopher Evans, of Ohio, as chairman, and E. T. Bent, of Illinois, an operator, as secretary. Representatives of operators were present from Ohio, Indiana, Illinois, Pennsylvania, and West Virginia, and of miners from these States and Maryland. The basis of representation was fixed at 8 votes—4 to be cast by the miners and 4 by the operators—for each of the States of Illinois, Indiana, Ohio, Pennsylvania, and West Virginia. A scale of prices to be paid for mining in specified districts in Pennsylvania, Indiana, Illinois, Iowa, Ohio, and West Virginia, ranging from 56½ cents a ton, in the Staunton and Mount Olive districts, to as high as 95 cents a ton in the Wilmington (Illinois

district, which had previously been prepared at the Pittsburg meeting, was adopted. The prices were to prevail from May, 1886, to May, 1887. A board of arbitration and conciliation, consisting of five miners and five operators at large and one miner and one operator from each of the States represented in the scale, was elected, to which all questions of an interstate or national character were to be submitted for adjustment. Oscar Townsend, of Ohio, was its president, and Christopher Evans, of the same State, secretary. This was probably the first movement of a national character in this country having for its object the establishing of methods of conciliation between capital and labor.

It was recognized at the very beginning that the problem before both operators and miners was a control of the competitive districts in those States having a common market. Such a control, to be effective, meant that the operators and miners in one district should not have any advantage over the operators and miners in another district. If by any chance the coal of one district came to market bearing a lower price than the product of the other districts, the cheaper commodity would necessarily undersell that bearing a higher price. The tendency under such conditions would be for the price of all the coal, from whatever district, to reach the level of the cheapest. Thus there could be no favored district, but all the factors entering into the price of coal—natural advantages, nearness to market, cost of transportation, the quality of the coal, the price of mine labor, and the numerous other elements entering into the cost of producing coal—must be so regulated that the product from all the districts should bear very nearly the same price when it reached the market. Moreover, the task undertaken, to be successful, meant a control not only over the competitive districts having a common market, but also over all the competitive fields having different markets. In brief, it was a problem of the national control of the law of competition as it operated in all the fields and markets where coal was produced and sold.

With a clear conception of the intention of the movement, it is not surprising that it did not succeed. In the first place, only in the central competitive territory—Ohio, Indiana, Illinois, and parts of West Virginia and Pennsylvania—which had a common market on the Lakes and in the Northwest, could the operators and miners be induced to take part in the movement, and the other fields were left practically unorganized. Even within this section it was not possible for all parties interested to agree at once upon any particular method of adjusting the widely varying conditions. Soon the operators of one district complained that the operators of another district possessed advantages which enabled them to put their coal on the market at a lower price and thus to undersell the former. Counter charges followed, and attempts were made by those believing themselves to be at

a disadvantage to remedy the particular conditions of which they complained. Much friction was the result, and failure after failure to keep the basis agreed upon was reported from the different districts. So many unforeseen factors continually entered in to disturb temporary adjustments that the agreement could not keep the competitive districts together. The Illinois operators were the first to withdraw. The Indiana operators followed in 1888.

The success of the federation itself was spasmodic, there being much internal dissension as well as strong opposition to the exercise of its power. This made itself openly evident in 1889 by the organization of the National Progressive Union, with John McBride, of Ohio, as president. Like the Knights of Labor branch of miners, it was a secret organization. The period that followed is conspicuous for the internal strife which broke out among the different organizations claiming jurisdiction over the coal-mine workers. The energies of their officers were now spent in fruitless warfare against one another, the conflict at times growing intensely bitter. Strikes begun by one or the other organization were lost through the antagonism and ever the open hostility of the others, and by the close of the decade the coal miners' organizations were in a state very near exhaustion. Of the 221,000 mine workers in the country in 1890, not more than 45,000 were enrolled in the different organizations.

Seeing nothing but defeat to all the unions if such a course was continued, John Rea, president of the National Progressive Union, W. T. Lewis, master workman of the National Trades Assembly, No. 135, John McBride, and other leaders in these two factions started a movement for a consolidation. At separate conventions held at Columbus, Ohio, in January, 1890, the two organizations decided to affiliate, and in a joint convention they formed the United Mine Workers of America. John Rea, president of the Progressive Union, the stronger of the two affiliating organizations, was made the first president of the new organization. The Trades Assembly retained its secret methods and to some extent its individuality, in that the president of the United Mine Workers was also elected master workman of the assembly. The combined membership was about 20,000, being strongest in Pennsylvania, Ohio, Indiana, and Illinois. The total number of bituminous mine workers at this time was 192,000, and the total annual production of soft coal 111,302,000 tons.

The objects of the United Mine Workers of America, as stated in the preamble to the constitution, were to increase wages, to secure payment in lawful money, to establish weekly pay days and the right of the mine workers to spend their earnings wherever they choose; to protect the lives of mine employees through the introduction of safety appliances and through securing legislation toward the same ends; to establish an eight-hour work day; to prohibit the employment of chi

dren under 14 years of age; to have laws enacted for weighing or measuring the coal they mined; to prevent the coal companies employing detectives or guards in times of strikes or lockouts, and to establish arbitration and conciliation for the settlement of disputes between the mine workers and their employers.

The early history of the United Mine Workers is that of an organization passing through an existence so precarious as to cause the reviewer of the present day to wonder that it ever succeeded in living to attain its present strength. It came into being at a time when the effect of the change in the nature of immigration—from Irish, German, English, and Welsh, to Polish, Hungarian, Austrian, and Italian—was felt most injuriously by labor employed in the coal-mining industry. The cheaper Slav labor poured into the mining States and thus put in operation among the mine laborers as never before the great law of competition, the result being demoralization of the standards of living that had prevailed among the other nationalities. To unite all these antagonizing elements in harmonious action for the common good of all mine workers was a task requiring the strength of a giant organization. The attempt of the new union to undertake it is curiously illustrated by the journal and constitution of the organization being printed in English and Slavonian, and its manuals in English, Lettish, Italian, Polish, and Slavonian. During the period preceding 1890 not only had the coal-mining industry been filled up with these different types of laborers, but there had been a rapid extension of old along with the construction of new railroad lines, the result being to extend greatly the coal-producing area. It is estimated that enough mines were opened in 1890 to have produced 40,000,000 tons more of bituminous coal than were mined in that year if the 192,000 mine employees had been given regular employment; or, in other words, the total of 111,302,000 tons produced that year could have been mined with 73,000 fewer miners than were then engaged in the coal industry. Despite this condition the coal area continued to be extended in 1891, 1892, and 1893, and the number of bituminous mine employees continued to increase, there being 52,000 more in 1894 than in 1890.

When it is remembered that the market price of coal is determined, to a large extent, by the price of mine labor—by the wages of the mine workers—it is not difficult to conceive the damaging effect such a condition of oversupply of labor had upon the joint-conference movement. In fact, this condition of the mine-labor market was one of the contributing causes of the failure of that plan. With a glutted labor market—with men bidding against one another for the sale of their labor—the price of mine labor generally tended toward the price set by those groups having the lowest cost of maintaining their labor, and *these were now the pauper laborers from the central European coun-*

tries. This cheaper labor poured into the unorganized fields and gave to the operators in those States, now competing in the same markets with those of the organized States, an advantage in the cost of production over the fields where the organized mine workers were striving to check such immigration.

Thus the United Mine Workers, at the very outset, was face to face with conditions that foretold falling prices and reductions in wages, the baneful effects of which were to be felt by the mine employees for many years. With an overproduction of coal and an oversupply of labor when the period of depression set in in 1893, many of the mines had to be closed, and so many thousands of mine workers were thrown out of employment that the governors of the States issued public appeals for aid. That the new organization found itself involved in numerous strikes is not surprising. With less than one-sixth of the miners of the country organized, it undertook to conduct strikes in Iowa, in the coke fields of Pennsylvania, in the Pittsburg district, and in Indiana. All proved disastrous to the miners and to their organization. Not only did the miners fail to secure their demands, the principal one of which was for an eight-hour workday, but the union had lost 12,000 members at the end of the year. The defense fund provided for by the first convention brought in only \$70,000. The only success of the year was the securing of favorable screen legislation in Illinois, Indiana, and West Virginia. By this time only the Pittsburg and Ohio operators and miners were in the joint-conference movement, and even these withdrew in 1891 from the agreement through a failure to settle the miners' demand for an eight-hour workday. The years following proved even more discouraging.

The fifth annual convention of the United Mine Workers at Columbus, in April, 1894, not only looked back on general failure, as far as definite accomplishment was considered, but looked forward to prospects that seemed even worse. The movement for higher wages in the Pittsburg district and in West Virginia not only was a complete failure, but was followed by a period of reduction in wages with the beginning of the industrial depression in 1893. At first this had the effect of forcing the mine workers into the union, the membership soon reaching 70,000, with 161 new locals and assemblies in Pennsylvania, Kansas, Missouri, Illinois, Tennessee, Kentucky, Ohio, and Indiana; but the members were in such financial straits that the organization released them from the payment of dues.

Mining rates had been steadily reduced in the Pittsburg district, wages had decreased in the central Pennsylvania, West Virginia, and Ohio fields, and reductions were threatened in the western and southwestern coal-producing States. To prevent this, and in the hope of restoring the scale of prices for mining and the conditions of employment which prevailed at the beginning of May, 1893, the fifth annual

convention ordered a suspension of mining operations to take effect April 21, 1894. At this time the organization had only 13,000 paid-up members and barely \$2,600 in the treasury. Notwithstanding this, nearly 125,000 mine workers quit work on that day, and the number was increased to 180,000 at the end of eight weeks. It was not the intention of the leaders to suspend coal mining entirely, but only during every alternate two weeks until the glutted markets were depleted, in the hope that increased prices would bring increased wages. But after the men had come out they refused to go back and the suspension developed into a widespread strike, which affected the eight principal soft-coal producing States of Ohio, Indiana, Illinois, Pennsylvania, Kansas, Missouri, Kentucky, and Tennessee. Its object was defeated by the operators and miners of the two Virginias, Maryland, and the anthracite region of Pennsylvania increasing their output and supplying the Lake markets while the strike was on. Work was resumed on June 12 by action of the Cleveland convention of mine workers, which left a settlement to the national executive board and the district presidents. This settlement was at the time regarded as a compromise in that a slight increase in wages was secured for the mine workers in Ohio, Indiana, and western Pennsylvania, while a reduction in wages was accepted in central Pennsylvania, in Illinois, and in some of the Southern States. John McBride, who had been elected president in 1892, was at this time at the head of the organization.

The strike was far from being a success except perhaps in a negative sense in that it temporarily checked further reductions in wages. The United Mine Workers was almost destroyed. The compromise which brought the strike to a close saw the end, for the time being, of the interstate agreement between the operators and miners of the central competitive territory. Repeated attempts had been made in 1892 and 1893 to restore the joint conference in the central competitive districts, but none of them succeeded. In some of the States independent agreements between the operators and miners took its place. Through these the mine workers in the different fields were now forced to accept reduction after reduction in wages, as the operators having a greater cost of production were compelled to meet the competition of those having a lower cost of production. The great law of competition was absolutely beyond the control of both operators and miners, and demoralization of all interests concerned in the industry followed. The United Mine Workers emerged from the strike with barely 8,000 members, and was too poor to defray the expenses of national executive board meetings, the business having to be carried on by correspondence. Nor was the association able to meet the expenses of railroad fare for delegates to the seventh annual convention, as provided for in its constitution. The National Trades Assembly, which had at first *maintained its independent form and which had later become entirely*

independent of the Knights of Labor, was now dissolved. A period of low wages, adverse conditions of employment (conditions determined almost wholly by the operators), frequent unsuccessful strikes, comparative idleness during part of the year for many of the mine employees, desertions by the hundreds until over 90 per cent of the coal-mine workers of the country were outside the organization, and a bankrupt treasury, seemed to indicate the early dissolution of the United Mine Workers, and the most stout hearted of the leaders lost hope.

In 1896, however, the industrial situation began to improve. Rising prices, following the partial depletion of the markets and a generally increased demand for fuel from the industries, had their effect on the coal industry. M. D. Ratchford, who had been at the head of the Ohio miners, was now president of the United Mine Workers. McBride had resigned in the fall of 1894 to become president of the American Federation of Labor, and was succeeded by Philip Penna, of Indiana, who served until Ratchford's election in 1897. A convention of the organization was held at the beginning of that year, and it resolved upon a demand for a general increase in wages of 15 per cent, leaving the question of a strike to enforce the demand to the executive board and the district presidents. During the period of depression the price for mining had fallen from 60 cents a ton to 54 cents in the Pittsburgh district and to an average of 47 cents in other fields. With only 10,000 members, of whom 7,000 were in Ohio, and despite the fact that there was an empty treasury and that many miners were already idle, the officers of the union decided upon a strike, which was ordered for July 4, 1897. The order was obeyed by over 100,000 men in eleven States, including a part of the anthracite region of Pennsylvania, and there was a general suspension of operations in Pennsylvania, West Virginia, Ohio, Indiana, and Illinois. A compromise was effected at a conference of operators and miners at Pittsburgh on September 3. There was to be an average advance of about 20 per cent in wages, with the understanding that the operators and miners of the central competitive coal fields would meet in Chicago on January 17 "for the purpose of formulating a wage scale and of making an annual contract by mutual joint agreement." In order to give the operators and miners in all the fields time to settle upon the basis agreed to, there was to be no resumption of mining for ten days, but in this case, as in many previous ones, each district and field seemed to care only for its own particular interests, with the result that the settlement succeeded only in Ohio, western Pennsylvania, Indiana, and a portion of Illinois.

This strike proved to be the most successful movement of its kind ever undertaken in America up to that time. A period of renewed

convention April 21, 1900, members a nearly 125, was increas- intention o- ing every a in the hope after the m- developed i- soft-coal pr- Kansas, Mi- by the open- anthracite m- ing the Lak- on June 12, 1900, which left a- presidents, in that a sli- Ohio, Ind- was accept- Southern E- 1892, was a- The strik- sense in the United Mi- brought th- interstate - competitiv- 1893 to res- but none o- ments bet- these the - reduction - cost of pr- moving a l- absolutely - lization - United M- members, - ve board - ndence. - re for d- - constit - untaine-

Industrial prosperity now set in over the entire country, which marks a turning point in the history of the United Mine Workers. For one of the poorest of labor organizations it became within five years the strongest single labor organization in the world. The reestablishment of the intricate agreement in the central territory brought an advantage in the adoption of a uniform screen, and a uniform day wage, along with an eight-hour workday. The most conspicuous result was that a means was established for doing away to a great extent with the necessity for strikes in the central coal-producing States.

The success of this joint movement, with its objects and aims, was:

1. That the movement is founded, and that it is to rest upon the basis of competitive equality, and upon well-defined and definite lines.

2. That the contract relations existing between the operators and the miners, to enforce strikes and lockouts, disputes and differences, are generally avoided by meeting in joint convention and making common agreements for specified periods of time.

3. That the miners recognize the sacredness and binding nature of contracts and agreements thus entered into, and are pledged in honor to carry out and execute contracts and agreements made by and between the operators and the miners, having no standing in court, on the one hand, and a collective body of business men doing business individually or in corporate capacity on the other, each of the latter having property and tangible assets subject to execution.

4. That we deplore, discourage, and condemn any departure from the letter or spirit of such trade agreements or contracts, and any departure be deemed by all parties in interest for the welfare of the coal-mining industry and for the public good as well, and that such departure is first definitely, specifically and mutually agreed upon by all parties in interest.

5. That such contracts or agreements having been entered into, we pledge ourselves severally and collectively bound in honor to carry out and execute with in letter and spirit, and are so pledged to use our influence and authority to enforce these contracts and agreements, inasmuch as they rest in the main upon mutual confidence as their basis.

The result of the interstate joint conferences following the strike of 1899 was summed up in "the and between the operators and miners of Illinois, Indiana, Ohio, and western Pennsylvania," at Chicago, in January, 1900. It provided as follows:

"That the operators and miners of mining screened lump coal shall hereafter, from and until the date of the strike above named, excepting the Southern Illinois, the Rockwell district of Indiana to pay 10 cents per ton of 2,000 lbs. of 12 to 14 inches, western Pennsylvania - the rest of the State of Pennsylvania shall be determined by the operators and miners of the same of rock run-of-river. The operators and miners of Pennsylvania shall be determined by the operators and miners of the same of rock run-of-river."

actual percentage of screenings passing through such screens as is hereinafter provided, it being understood and agreed that screened or run-of-mine coal may be mined and paid for on the above basis at the option of the operators, according to market requirements, and the operators of Indiana bituminous shall also have like option of mining and paying for run-of-mine or screen coal.

Second. That the screen hereby adopted for the State of Ohio, western Pennsylvania and the bituminous district of Indiana shall be uniform in size, six feet wide by twelve feet long, built of flat or Akron-shaped bar of not less than five-eighths of an inch surface, with one and one-fourth inches between bars, free from obstructions, and that such screen shall rest upon a sufficient number of bearings to hold the bars in proper position.

Third. That the block-coal district of Indiana may continue the use of the diamond screen of present size and pattern with the privilege of run-of-mine coal, the mining price of which shall be determined by the actual screenings; and that the State of Illinois shall be absolutely upon a run-of-mine system, and shall be paid for on that basis.

Fourth. That an advance of 10 cents per ton of 2,000 pounds for pick-mined screened coal shall take effect in western Pennsylvania, Hocking Valley and Indiana bituminous districts on April 1, 1898, and that Grape Creek, Ill., and the bituminous district of Indiana shall pay 40 cents per ton run-of-mine coal from and after same date, based upon 66 cents per ton screened coal in Ohio, western Pennsylvania and the Indiana bituminous district, same to continue in force until the expiration of this contract.

Fifth. That on and after April 1, 1898, the eight-hour workday with eight hours' pay, consisting of six days per week, shall be in effect in all of the districts represented, and that uniform wages for day labor shall be paid the different classes of labor in the fields named, and that internal differences in any of the States or districts, both as to prices or conditions, shall be referred to the States or districts affected for adjustment.

Sixth. That the same relative prices and conditions between machine and pick mining that have existed in the different States shall be continued during the life of this contract.

Seventh. That present prices for pick and machine mining and all classes of day labor shall be maintained in the competitive States and districts until April 1, 1898.

Eighth. That the United Mine Workers' organization, a party to this contract, do hereby further agree to afford all possible protection to the trade and to the other parties hereto against any unfair competition resulting from a failure to maintain scale rates.

This contract was to remain in force for one year from April 1, 1898, and another interstate convention was to be held at Pittsburg in

January 1899. This contract was signed by the operators and miners of the States of West Virginia and Kentucky, and by a representative of the West Virginia miners, (⁶)

enforce a boycott against the West
refused to become a party to the

industrial prosperity now set in over the entire country, which marked a turning point in the history of the United Mine Workers. From one of the poorest of labor organizations it became within five years the strongest single labor organization in the world. The reestablishment of the interstate agreement in the central territory brought an advance in the wage rate, the adoption of a uniform screen, and a uniform day wage scale, along with an eight-hour workday. The most conspicuous result was that a means was established for doing away to a great extent with the necessity for strikes in the central coal-producing States.

The principles underlying this joint movement, with its objects and purposes, are as follows:^(a)

First. That this joint movement is founded, and that it is to rest, upon correct business ideas, competitive equality, and upon well-recognized principles of justice.

Second. That, recognizing the contract relations existing between employer and employee, we believe strikes and lockouts, disputes and friction, can be generally avoided by meeting in joint convention and by entering into trade agreements for specified periods of time.

Third. That we recognize the sacredness and binding nature of contracts and agreements thus entered into, and are pledged in honor to keep inviolate such contracts and agreements made by and between a voluntary organization, having no standing in court, on the one hand, and a merely collective body of business men doing business individually or in corporate capacity on the other, each of the latter class having visible and tangible assets subject to execution.

Fourth. That we deprecate, discourage, and condemn any departure whatever from the letter or spirit of such trade agreements or contracts, unless such departure be deemed by all parties in interest for the welfare of the coal-mining industry and for the public good as well, and that such departure is first definitely, specifically and mutually agreed upon by all parties in interest.

Fifth. Such contracts or agreements having been entered into, we consider ourselves severally and collectively bound in honor to carry them out in good faith in letter and spirit, and are so pledged to use our influence and authority to enforce these contracts and agreements, the more so since they rest in the main upon mutual confidence as their basis.

The first of the interstate joint conferences following the strike of 1897 was entered into "by and between the operators and miners of Illinois, Indiana, Ohio, and western Pennsylvania," at Chicago, in January, 1898. It provided as follows:

First. That an equal price for mining screened lump coal shall hereafter form a base scale in all the districts above named, excepting the State of Illinois, the block-coal district of Indiana to pay 10 cents per ton over that of Hocking Valley, western Pennsylvania and Indiana bituminous district; and that the price of pick run-of-mine coal in Hocking Valley and western Pennsylvania shall be determined by the

^aResolution adopted by the fifth annual joint convention at Indianapolis, 1902.

actual percentage of screenings passing through such screens as is hereinafter provided, it being understood and agreed that screened or run-of-mine coal may be mined and paid for on the above basis at the option of the operators, according to market requirements, and the operators of Indiana bituminous shall also have like option of mining and paying for run-of-mine or screen coal.

Second. That the screen hereby adopted for the State of Ohio, western Pennsylvania and the bituminous district of Indiana shall be uniform in size, six feet wide by twelve feet long, built of flat or Akron-shaped bar of not less than five-eighths of an inch surface, with one and one-fourth inches between bars, free from obstructions, and that such screen shall rest upon a sufficient number of bearings to hold the bars in proper position.

Third. That the block-coal district of Indiana may continue the use of the diamond screen of present size and pattern with the privilege of run-of-mine coal, the mining price of which shall be determined by the actual screenings; and that the State of Illinois shall be absolutely upon a run-of-mine system, and shall be paid for on that basis.

Fourth. That an advance of 10 cents per ton of 2,000 pounds for pick-mined screened coal shall take effect in western Pennsylvania, Hocking Valley and Indiana bituminous districts on April 1, 1898, and that Grape Creek, Ill., and the bituminous district of Indiana shall pay 40 cents per ton run-of-mine coal from and after same date, based upon 66 cents per ton screened coal in Ohio, western Pennsylvania and the Indiana bituminous district, same to continue in force until the expiration of this contract.

Fifth. That on and after April 1, 1898, the eight-hour workday with eight hours' pay, consisting of six days per week, shall be in effect in all of the districts represented, and that uniform wages for day labor shall be paid the different classes of labor in the fields named, and that internal differences in any of the States or districts, both as to prices or conditions, shall be referred to the States or districts affected for adjustment.

Sixth. That the same relative prices and conditions between machine and pick mining that have existed in the different States shall be continued during the life of this contract.

Seventh. That present prices for pick and machine mining and all classes of day labor shall be maintained in the competitive States and districts until April 1, 1898.

Eighth. That the United Mine Workers' organization, a party to this contract, do hereby further agree to afford all possible protection to the trade and to the other parties hereto against any unfair competition resulting from a failure to maintain scale rates.

This contract was to remain in force for one year from April 1, 1898, and another interstate convention was to be held at Pittsburg in January, 1899.

This agreement was signed by the operators and miners of the States represented^(a) and by a representative of the West Virginia miners,^(b)

^a Excepting the Ohio operators.

^b Later the United Mine Workers attempted to enforce a boycott against the West Virginia product because the operators of that State refused to become a party to the agreement or to abide by its provisions.

as well as by members of the national executive board of the United Mine Workers of America. They did not agree to all its provisions in a day, or without heated controversies, which more than once threatened to end the movement. In fact, the Ohio operators, who had insisted upon a 5-cent differential against the Pittsburg thin-vein district, refused to sign the agreement, claiming that the prices arrived at placed them at a disadvantage with competing districts, but they finally consented to its provisions. The variations in the natural conditions in the different districts, the inequality in wages, the differences in the hours of labor each day, and the widely varying terms of employment, such, for instance, as the purchase of powder from the operator, dealing at the company store, etc., were so great in the several States and in the different districts within a State as to present what seemed at times almost insolvable problems. To allay as much as possible the antagonism to which these widely varying conditions gave rise the Chicago convention provided for a joint committee of two operators and two miners, to be chosen by each State, to formulate a uniform day work scale, based upon the districts upon which the mining prices were based, which was to become a part of the interstate agreement. This committee met at Columbus in March. The scale it adopted for all inside day labor fixed the wages of track layers and timbermen at \$1.90, pipemen at \$1.85, trappers at \$0.75, and track layers' helpers, bottom cagers, drivers, trip riders, water haulers, company men in long-wall mines of third-vein district, northern Illinois, and other inside day labor at \$1.75. This scale was arrived at by taking the average of the wages paid in all of the competitive districts and reducing this average to an eight-hour day, then adding the advance to correspond to the advance in price of mining to be paid in April. "Owing to the variations of conditions over which we have no control" the committee failed to agree upon a uniform rate of wages for the different classes of outside labor for the entire competitive field, but left the employment of these men and the wages to be paid them entirely to the employers and to such employees until the next interstate joint conference. It was agreed, however, that where any of the laborers then engaged in outside day labor in the competitive field preferred to work in the mine rather than to accept the wages paid to members of their class they were to be employed to mine coal. An eight-hour day was defined as "eight hours in the mine at usual working places for all classes of inside day labor," exclusive of the time required in going to such places in the morning and returning from them at night. Drivers were to take their mules to and from the stables, "their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named." "When men go into the mine in the morning they shall be

entitled to two hours' pay whether or not the mine works the full two hours. But after the first two hours, the men shall be paid for every hour thereafter by the hour, for each hour's work or fractional part thereof. If for any reason the regular routine work can not be furnished the inside labor for a portion of the first two hours, the operators may furnish other than regular labor for the unexpired time."

The first agreement thus formulated a means of settling many vexed questions. It declared for an equal price for mining screened lump coal as a base scale for all districts but Illinois; decided that the Indiana block-coal district should pay 10 cents more a ton than certain bituminous districts, and settled upon a plan for determining the price of pick run-of-mine coal in the Hocking Valley (Ohio) and western Pennsylvania districts. Rates in the different districts were established and advances determined upon, uniform wages for inside day labor agreed to, eight hours recognized as a day's work, and an understanding reached by which all disagreements over prices and conditions in any district were to be adjusted in that district. With the adoption of a uniform screen for Ohio, the Indiana bituminous, and the western Pennsylvania fields not only was the size of the screen reduced to the smallest prevailing standard, but to a large extent the screen was abolished entirely.^(a) The general effect of this agreement was to advance wages about 18 per cent and to reduce the hours of labor in about the same proportion. More friendly relations between employers and employees were established, and, more important even than this, the miners' union was recognized.

The Pittsburg convention of January, 1899, readopted the Chicago agreement for the scale year ending March 31, 1900. It was also agreed that the machine question of Illinois (outside of the Danville district, the basing point, where prevailing prices were to continue) should be taken up during the coming year by the Illinois State convention for adjustment by conciliation or arbitration; and that if it could not be settled by the Illinois State convention, it was to be referred to a board of arbitration to be composed of seven members. The question in dispute was whether the various districts of Illinois were entitled to any reduction in the Springfield scale differentials, as against Danville, the basing point; and if so, how much. The Columbus inside day wage scale was to continue.

In February, 1900, at Indianapolis, the joint convention entered into a new agreement, as follows:

It is hereby agreed—

SECTION 1. (a) That an advance of fourteen (14) cents per ton of two thousand (2,000) pounds for pick mined, screened coal, shall take effect in western Pennsylvania thin vein, the Hocking, the basing district of

^a President Ratchford's report to the tenth annual convention of the United Mine Workers.

Ohio, and the block-coal district of Indiana. (b) That the Danville district, the basing point of Illinois, shall be continued on an absolute run-of-mine basis, and that an advance of nine cents (9 cents) per ton over present prices be paid in the district named. (c) That the bituminous coal district of Indiana shall pay forty-nine cents (49 cts.) per ton for all mine-run coal loaded and shipped as such. All other coal mined in that district shall be passed over a regulation screen, and be paid for at the rate of eighty cents (80 cts.) per ton of two thousand (2,000) pounds for screened lump.

SEC. 2. That the screen hereby adopted for the State of Ohio, western Pennsylvania, and the bituminous district of Indiana, shall be uniform in size, six (6) feet wide by twelve (12) feet long, built of flat or Akron-shaped bar, of not less than five-eighths ($\frac{5}{8}$) of an inch surface, with one and one-fourth ($1\frac{1}{4}$) inches between bars, free from obstructions, and that such screen shall rest upon a sufficient number of bearings to hold the bars in proper position.

SEC. 3. That the block-coal district of Indiana may continue the use of the diamond-bar screen, the screen to be seventy-two (72) feet superficial area, of uniform size, one and one-quarter inches between the bars, free from obstruction, and that such screens shall rest upon a sufficient number of bearings to hold the bars in proper position.

SEC. 4. That the differential between the thick and thin vein pick mines of the Pittsburg district be referred to that district for settlement.

SEC. 5. (a) That the price of machine mining in the bituminous district of Indiana shall be eighteen (18) cents per ton less than the pick-mining rate for screened lump coal, when punching machines are used; and twenty-one and one-half ($21\frac{1}{2}$) cents per ton less than pick-mining rate when chain machines are used. When coal is paid for on run-of-mine basis, the price shall be ten (10) cents per ton less than the pick-mining rate when punching machines are used, and twelve and one-half ($12\frac{1}{2}$) cents per ton less than pick-mining rates when chain machines are used. (b) That the machine-mining rate in the Danville district, the basing point of Illinois, on both punching and chain machines, be thirty-nine (39) cents per ton.

SEC. 6. That the machine-mining rate in the thin vein of the Pittsburg district, and the Hocking, the basing district of Ohio, for shooting, cutting and loading, shall be advanced nine (9) cents per ton. And that the block-coal district of Indiana shall be advanced eleven and one-half ($11\frac{1}{2}$) cents per ton.

SEC. 7. That the mining rates in the central district of Pennsylvania be referred to that district for adjustment.

SEC. 8. That the advance on inside day labor be twenty (20) per cent, based on the present Hocking Valley scale; with the exception of trappers, whose compensation shall be one dollar (\$1) per day.

SEC. 9. That all narrow, dead work and room turning shall be paid a proportionate advance with the pick-mining rate.

SEC. 10. That internal differences in any of the States or districts, both as to prices or [and] conditions, shall be referred to the States or districts affected, for adjustment.

SEC. 11. The above scale is based upon an eight (8) hour workday.

This Indianapolis agreement was renewed in 1901 and 1902. In February, 1903, the interstate convention decided to continue the

Indianapolis agreement for the year ending March 31, 1904, with increases in mining prices and inside day wages. On pick mining in western Pennsylvania thin vein, the Hocking (the basing district of Ohio), and the Indiana block and bituminous districts the increase was 10 cents per ton on inch and a quarter screened lump coal, and in the bituminous district of Indiana and at Danville (the basing point for Illinois) 6 cents per ton on mine-run coal. On machine mining in western Pennsylvania thin vein and the Hocking (the basing district of Ohio) the increase was 8 cents per ton, and in the block and bituminous districts of Indiana, 10 cents per ton, on screened lump coal; and in the bituminous field of Indiana and at Danville, 6 cents per ton on mine-run coal. With the same conditions as those of the Columbus day-wage-scale agreement, inside day wages were fixed at \$2.56 for track layers, bottom cagers, drivers, trip riders, water and machine haulers, and timbermen; \$1.13 for trappers, \$2.50 for pipemen, and \$2.36 for track-layers' helpers and other inside day laborers (including company men in long wall mines of third vein district, northern Illinois). Yardage and dead work were advanced 12½ per cent.

The definite results of the working of the interstate joint conference movement for the past six years have been shown. An inquiry into the operation of the machinery by which they are brought about is no without interest.

The convention meets usually about the last week in January, in a city determined upon by the preceding convention, to agree upon wages and conditions of employment for the scale year, from April 1 to March 31. The miners are represented by the district (State) and national officers of the United Mine Workers of America. The operators of each State, in some of which they have a distinct organization have four representatives and the miners from each State four representatives. Usually the conference is called to order by the president of the United Mine Workers, who is made temporary chairman. An operator is generally selected as permanent chairman, and a representative of the miners' union as secretary, with an operator as assistant secretary. Two members from each side from each State make up the different committees, such as credentials, rules, and order of business, etc., excepting the scale committee. This gives each side equal representation upon all committees.

Two sessions of the convention, usually open to the public, are provided for each week day, with occasional evening sessions. The miners' representatives have seats on one side of the hall and the representatives of the operators upon the other side. In deciding questions on the floor of the convention each side has four votes for each State, a total of 16 votes each. To reach a decision upon any question there must be a unanimous vote of the miners and operators of each State, and in no event is this rule suspended in its application to

questions affecting the proposed scale and agreement. The order of business consists of the report of the credentials committee, appointment of the scale committee, report of this committee, discussion of this report, and adjournment. This order of business appears simple, and yet it sometimes takes two or three weeks, or even longer, to dispose of it; and in doing so some of the most complex business questions with which it is the lot of any group of men to deal are discussed if not settled.

Before the convention assembles the representatives of the miners attend the annual convention of the United Mine Workers and learn from the rank and file of that organization what particular or general questions are uppermost in the different fields and what the workers expect of the operators in the way of improved conditions of employment and the remedying of particular grievances. In a meeting prior to the joint conference the miners' representatives decide upon the line of policy they will pursue in presenting their claims to the operators. These claims come before the joint conference in the form of a resolution stating the prices that are to be paid for mining and the conditions of employment that are to prevail in the central competitive field and in the particular States composing it represented in the meeting. The claims most frequently embraced in the resolutions are for a general increase in wages, a uniform mining system, and a uniform wage scale for all outside day labor, an eight-hour workday, a differential per ton between pick and machine mining, a minimum day wage for specified occupations, freedom in purchasing powder and other supplies, and the adoption of a check-off system in all the competitive districts by which the companies collect for and pay over to the United Mine Workers the dues and assessments of its members. A general discussion of the resolution follows, during which the representatives of the miners give the reasons as they see them why the claims asked should be granted. These are replied to by the operators with just as plausible reasons from their standpoint why the changes requested should be refused. After a full and free discussion the resolution is put to a vote and is usually lost by the miners voting unanimously for its adoption and the operators voting unanimously that it be not adopted. Under the rules requiring a unanimous vote of both sides the motion to adopt the resolution is declared lost and then the whole question on motion goes to the scale committee.

Early in the convention each State selects four representatives from each side to make up the membership of the scale committee, each side choosing its own representatives. This makes four miners and four operators from each State, a total of thirty-two members. In addition to these, for each representative on the committee each State may have an alternate, who enjoys all the privileges of the others *except that of voting*, unless his principal is absent. Sometimes com-

missioners who represent various fields and interests, States, and districts are admitted to the joint scale committee, but they have no vote in its deliberations. It is in this scale committee that the real work of the convention is usually transacted. It meets and organizes, adopts the rules governing the joint convention as its rules, and at once takes up its order of business. This is ordinarily a motion to adopt the scale as presented by the miners. A vote similar to that recorded in the joint convention generally results; the operators vote unanimously against its adoption and the miners unanimously for the motion. Then the scale is taken up and discussed clause by clause. This brings out facts and figures from both sides, and many of the intricate and difficult questions involved in the conduct of this great business are presented in all their details. If any person doubts that there are two sides to all questions involved in the mining of coal he should attend one of the sessions of this scale committee. This is the great value of the whole movement—it enables the operator and the miner to see both sides of the questions that daily come up to perplex them, and each is convinced as he had not been before, probably, that all the truth is not on his side. One thing is true—these intricate questions are not discussed in the scale committee with that bias and fanaticism so often displayed in labor controversies where the questions are brought to the arbitrament of a strike, but logic and reason and good common sense are brought to bear upon them. The miners have demonstrated that they are possessed of these latter qualities just as much as have the operators. It is true that when it comes to determine finally the question at issue each side commonly votes unanimously against the other, but they have had the advantage of a free, honest, and friendly intercourse which tends to remove many of the obstacles that conspire to prevent a prompt settlement of the perplexing questions involved. Usually no decision is arrived at on any of the miners' demands, and then the scale committee reports to the joint convention after three, four, or even more days' sitting, including, sometimes, night sessions.

This report of the scale committee is received by the joint convention and then a motion is made that the scale be adopted. Here again the scale is taken up clause by clause and discussed, and the votes are usually the same—all the operators vote one way and all the miners the opposite. The scale is again referred to the joint scale committee, and immediately upon its meeting the second time a subscale committee of two operators and two miners from each State is selected, each State naming its members upon call of the roll. Then the scale committee adjourns to meet at the call of the subscale committee.

The meetings of the subscale committee are absolutely secret. No notes of what is said or done are taken by a stenographer or by any

of the members, and no records of any kind are kept of its proceedings. At these meetings both sides are as open and frank toward each other as it is perhaps possible to be. No attempt is made to hide any of the secrets of the trade, and the whole intricate problem is laid bare to both sides. Correct figures are given, and statements are made as to the existence of certain conditions which may throw new light on the subjects under discussion and present the actual state of affairs. As a result the subcommittee has not failed once in six years to reach an agreement.

Inasmuch as the claims of the miners have been opposed in all the meetings of the convention and of the scale committee so far held, it is the custom for the operators to present to the subscale committee their propositions as to the prices to be paid mine labor and the conditions of employment they think should prevail for the ensuing year. These propositions the miners oppose. The operators' claims are then referred to the joint scale committee, in which the miners again reject them. Back goes the question of the adoption of a scale to the subscale committee. It may remain in session two days or two weeks. The result is an agreement. The subscale committee then reports its findings to the joint scale committee, which unanimously adopts it; the joint scale committee then reports its action to the joint convention, which in turn unanimously adopts the report. The scale as then agreed to is signed by two men from each side from each State. Usually the miners signing the agreement are the president and secretary of the district and the national officers of the United Mine Workers. Little other business then remains to be transacted and soon after the signing of the scale the convention adjourns to meet the following year at a place determined upon.

This interstate agreement, it is seen, settles several important questions. It sets the basing point in each State for determining prices to be paid for work about the mines, fixes upon 2,000 pounds as a ton for the entire central competitive field included in the agreement, recognizes the two general methods of fixing rates upon a screened-coal or mine-run basis, agrees upon regulation screens where the screen method is in use, establishes a differential between machine and pick mining under whichever method employed, between punching and chain machine mining, between thick and thin vein pick mines, and makes eight hours a day's work for all classes of mine employees. With these questions agreed upon, the mine employees and the operators in the different State and subdistrict conventions are not troubled with those particular problems, but are left free to devote all their attention to other vexing questions which may concern a smaller number of mine workers in a smaller area, but the settlement of which is none the less of vital importance in reaching some kind of an agreement.

Following the interstate joint conference the operators and miners of

each State (district) represented in it meet in joint convention in their respective States or districts, before April 1, and with the interstate agreement or contract as a basis adopt prices and determine upon the conditions of employment which are to prevail for the scale year. Each district convention takes the prices at the basing point in that State as fixed by the interstate conference, and regulates the prices in the different fields in that State according to the basis, prices for the different kinds of work varying as local conditions are found to require. On questions where an agreement can not be reached, a joint commission of operators and miners is appointed to investigate and settle them. Questions which it is agreed concern only certain sections are referred to the subdistricts in their conventions. After the State convention adjourns the operators and miners of the subdistricts, usually covering smaller areas within a State where sectional questions are matters of chief importance, hold a meeting, indorse the interstate and State agreements, and then contract for their own local area covering the requirements of its particular needs.

As has been intimated, the permanency of this joint conference movement was seen from its very inception to be dependent upon the existence of a strong national organization of mine workers with jurisdiction over each and all of the States included in the coal area of the country, and not alone over those within the central competitive territory. This the leaders of the miners thoroughly recognized, and in 1898 they began to direct their energies to accomplish that end. Under the leadership of John Mitchell, who succeeded to the presidency upon the retirement of Mr. Ratchford to become a member of the Industrial Commission, an era of remarkable growth was entered upon. During 1899, the United Mine Workers was extended into the coal-producing States west of the Mississippi River. Upon the refusal of the operators of that section to meet with the miners in a joint conference to regulate wages and conditions of employment, the union inaugurated a strike in Kansas, Arkansas, Indian Territory, and Missouri, which began on March 1, 1899, and continued for nearly a year in some districts in Arkansas and Indian Territory. In Kansas and Missouri the mining rate was advanced, hours of labor reduced, and the check-weighman system established. In the same year the union was extended into the southern coal fields of Kentucky, Tennessee, and Alabama, after strikes in those States. Such was the phenomenal growth of the organization that more than 475 new locals were established in 1899 and 608 in 1900, increasing the total enrollment in the latter year to 189,329 as compared with 54,700 in 1898. Instead of only 5 States being represented in the annual meetings of the United Mine Workers there were present at the tenth convention in Pittsburg, January, 1899, representatives from 13 coal-producing States and Territories. Separate agreements between operators and members of the United Mine

Workers were soon established in parts of Kentucky, Tennessee, Alabama, Iowa, Kansas, Missouri, central Pennsylvania, Michigan, and West Virginia. They follow the general lines laid down by the joint interstate agreement of the central competitive territory. The Iowa and Michigan operators and mine workers have endeavored time and again to secure admittance to the interstate conference, but their efforts have been opposed by the operators of Ohio, Indiana, and western Pennsylvania, while the operators of Illinois and the mine workers of all four States in the joint movement have favored admitting the representatives from these two States. For years the United Mine Workers have put forth efforts to bring the operators of West Virginia into the joint conference, the work of the organization in this direction being encouraged by the operators of all four States in the joint movement, but the union has so far failed in this seemingly Herculean task. As long as the West Virginia operators and miners are outside the joint conference agreement the very foundation of the movement is threatened. This is the more evident when it is remembered that West Virginia coal competes in the Lake markets with the coal from Ohio, Indiana, Illinois, and western Pennsylvania. Under the joint agreement as to wages and conditions of employment with the United Mine Workers, the operators of these four States have to meet a greater cost of production than the operators of West Virginia, the latter having advantages in cheaper labor, a larger number of hours of work per day by the miners, larger mining cars, more pounds to the ton, and in the general conditions of mining, such as weighing, dead-work, dockage, etc. These and other advantages enable the West Virginia operators to send their coal a greater distance to the same market and sell it for a less price per ton than the Ohio, Indiana, Illinois, and western Pennsylvania operators can afford to sell. The operators of West Virginia have persistently refused to enter the interstate movement for various reasons, prominent among which is their ability, under present conditions, to secure larger returns upon their investments. Not a few of the West Virginia operators have gone to that State from the anthracite fields of Pennsylvania and from the States in the central competitive territory which are governed by the joint agreement.

Because the operators and mine workers in the States included in the joint conference enter into agreements, it should not be inferred that both sides are perfectly satisfied on all the questions agreed to. This would be expecting the millenium in the industrial world. Ever since the joint movement was inaugurated, as far back as 1886, there have been differences of opinion between the operators and miners upon questions of common interest. On many of these they are still at opposite points of view. As to the advisability of uniform scale *provisions for all four States*, the miners favor and the operators

oppose such propositions; there is friction over questions growing out of machine and pick mining, the mine workers claiming that nearly all the benefits of machine mining go to the operator; there is always a controversy in the conference over the run-of-mine and screen methods of weighing and paying for the product of the miners' labor, the union insisting that the miner is the sufferer where the coal is screened before payment; even at the present time there is contention between the two parties as to the extent of the union's control over "outside" employees, the operators persisting in their claim that such employees are "company" men. The establishing and increasing of the differential between machine and pick mining has also more than once threatened the peace of the joint conference.

These and other disputed questions aside, however, certain fundamental principles have been established by the joint movement. The "right" of the mine workers to organize for their own protection and for the improvement of their condition of employment is recognized by the operators; the "right" of these men to be represented in settling disputes and agreeing upon the prices for which their labor is to be sold is conceded by the operators treating directly with the officers of the United Mine Workers of America. These two principles are now firmly established in the central competitive coal fields. Not only do the operators of those States depend largely upon the United Mine Workers to enforce the agreements entered into on behalf of the mine employees, upon nonunion employees as well as upon its own members, but they look to the union rather than to themselves to see that any operator who might attempt to violate the contract is forced to live up to its terms. In many cases the operators have gone so far as to recognize all their employees, with but few exceptions, as members of the United Mine Workers. The joint movement, in brief, has established well-defined "rights" on both sides. These are specified in the agreements, and accompanying them are certain duties which each side recognizes it owes to the other party to the contract.

Since the joint movement was resumed in the central competitive territory in 1898 no strike or lockout of any serious proportions has occurred in any of the States which are parties to the joint agreement. In the four years preceding, during which the agreement had lapsed for various causes, strikes and lockouts and general industrial unrest were the rule rather than the exception. It does not follow, however, that the joint agreement prevents absolutely all possibility of industrial disturbances—this power is not claimed for the movement by even its most ardent advocates. It does tend, however, to establish and preserve industrial harmony between the two conflicting interests and to secure more stable market conditions. The value of the joint movement is also reflected in the imitation of its principles by other branches of industry.

For the first time in the history of the trade-union movement among the coal miners of the United States the United Mine Workers, after the strike of 1897, made a serious attempt to include the anthracite mine employees in its organization. While it had established a few locals in the hard coal region as early as 1894, it was not until 1898 that national organizers were sent into the three fields in large numbers to organize thoroughly the territory. They went among men not wholly unfamiliar with labor organizations, for the anthracite mine workers had an experience in this direction which extended as far back as 1849. It is not intended to give here in detail the history of the labor movement among the anthracite miners. This has been done in an excellent manner by Dr. G. O. Virtue in "The Anthracite Mine Laborers," Bulletin of the Department of Labor, No. 13, November, 1897. Therefore, only brief reference is made to the more important aspects of the trade-union movement in the hard coal fields.

Although coal mining had been undertaken in the anthracite region as early as 1820,^a no indications of organization among the miners are found until 1849, when Bates Union, so named after John Bates, the leader of the men, undertook a strike for an increase in wages. Dissension among the members and the faithlessness of their leader, who is said to have absconded with the funds in the treasury, contributed to the loss of the strike and led to the destruction of the organization. It was composed principally of miners in the Schuylkill field.

Ten years later, about 1859, the miners of the Forestville Improvement Company formed a local union for mutual improvement, which was soon imitated by the mine workers of the other anthracite districts. At this time the total number of employees was about 10,000. The growth of these locals was retarded and nearly destroyed by the breaking out of the civil war, but at the close of the war there came renewed activity, and in 1868 we have accounts of a general convention of representatives from all three fields, meeting to consider the fall in prices and the problem of overproduction of coal. Wages had been reduced the previous year, and now further reductions were threatened. This condition had been brought about principally by the unrestrained competition, or rather speculation, which the close of the war ushered in, with the release of capital for investment and of men for work. It was marked by a general extension, outside as well as inside the anthracite region, of the railroads which transported to market the larger part of the product of the mines. This railway construction not only opened up new markets, but brought into operation such a large number of mines that all the evils of overproduction soon became prominent within the fields. The total output of the anthracite region in 1860 was 8,500,000 tons. This had nearly

^aThe first shipment was made by canal in that year by the Lehigh Coal and Mining Company.

doubled by 1870, the production in that year exceeding 16,000,000 tons. This increase came at a time, too, when bituminous coal was coming into more general use in manufacturing throughout the East, thus weakening the demand for the product of the anthracite mines.

Experience had taught the mine workers that overproduction meant falling prices and reduced wages. Their leaders began to see that it was to their best interests to regulate production rather than to wait until falling prices compelled them to strike against wage reductions. It was this clear conception of economic conditions that led to the formation of the Workingmen's Benevolent Association (afterwards known under a charter as the Miners and Laborers' Benevolent Association), which grew out of the general convention of 1868. Its constitution stated its objects as being to maintain a standard of wages, to provide for sick and disabled members, and to care for the widows and orphans.^a John Siney was its president, and he no doubt introduced into its management the English labor-union methods, with which he had become familiar while working in a cotton factory in England previous to his coming to this country in 1863. He entered the mines at St. Clair. A year or two prior to the organization of the miners the operators had formed associations in each of the three fields, which were united under the Anthracite Board of Trade of the Schuylkill coal region. It is through this board that we first find the operators treating with the mine workers as to wages and conditions of employment. This was not brought about, however, until a strike had been begun by the miners' organization.

The first strike of the mine employees under the Workingmen's Benevolent Association was declared on July 1, 1868, ostensibly for the enforcement of the eight-hour law, which had just then been enacted by the State legislature through the efforts of the miners, but in reality with the object of depleting the market, which had been glutted by the preceding period of speculation and overproduction. The only apparent success of the strike was in the latter direction. Even this was temporary, for in May of the following year overproduction was as bad as ever. The operators now proposed a reduction in wages, but the association decided upon a suspension of mining, which became effective May 10. Its object was "the reduction or depletion of the surplus of coal already in the market, together with the preventing, if possible, the enormous oversupply that was going to the market, thereby not only keeping the price of labor down to last winter's prices, but would eventually compel either local suspension or reduction of wages, and in consequence local strikes." This was stated in the order of the Miners and Laborers' Benevolent Asso-

^aArticle I of the constitution of the Summit Hill branch stated that "The object of the society is to make such arrangements as will enable the operator and the miner to rule the coal market."

ciation of June 9, 1869, directing the miners to return to work in all the districts where they "can agree with their employers as to basis and conditions of resumption." At the same time in reply to the general criticism with which the suspension had been met by the press, the order explained that "we do not nor have desired to run the coal too high in the market, but, on the contrary, we prefer the steady, healthy market which will afford to the operators and dealers fair interest on their investment; and at the same time receive for our share a fair day's wages for a fair day's work." In support of this position and to guard against future overproduction, certain restrictions were placed upon the men by the association, such as requiring the miners to load one car of coal less per day than formerly.

After a five weeks' suspension operations were resumed on condition that a sliding scale for regulating wages according to the selling price of coal would be established in the Lehigh and Schuylkill fields.^(a) At this time contract miners working on the mammoth vein were receiving 57½ cents a ton (48 cubic feet), company miners (those working by the day) \$16 a week, and inside laborers \$14 a week. For the Lehigh field these wages were to prevail when coal sold for \$5 a ton at tidewater (Elizabethport), with an increase of 15 per cent for every \$1 advance above that price. In the Schuylkill field, Port Carbon was the basing point and \$3 a ton the selling price of coal. For every 25 cents increase over this price wages were to advance 5 cents a ton. Wages were not to be affected if the price at either basing point fell below the basis rate. On this sliding-scale arrangement the miners, during the remaining months of 1869, received 12 per cent more than the basis wages.

For 1870 the board of trade proposed that the basis in the Schuylkill field be made \$2 a ton. This meant to the miners a reduction in wages of from 25 to 40 per cent, and the association refused to consider it. In January the board made a more favorable proposition, but still provided for a reduction in wages. The association insisted upon a continuance of the \$3 basis, and on April 2 the Schuylkill operators ordered a lockout, which continued until August 1. The mines in the Lehigh and Wyoming fields continued in operation. In July an agreement was reached on the old \$3 basis, but with an 8½ per cent sliding scale for each movement of 25 cents in the price of coal. A still more important change was made; wages were now to be affected if the price fell below the basis just the same as when the price went above the basis. The price of coal soon fell below the basis and remained there, with the result that the miners were forced to accept reductions instead of securing increases as in the previous year.

^a The miners of the Wyoming field had not taken a very prominent part in the suspension, being induced by higher wages to continue at work, and in consequence they did not secure the sliding scale.

Out of this suspension came what is believed to be the first signed joint agreement in the history of coal mining in this country. It was entered into July 29, at Pottsville, between a committee of the Workingmen's Benevolent Association, representing the mine workers, and a committee of the Anthracite Board of Trade, representing the operators. On the part of the association it was agreed not to sustain a man discharged for incompetency, bad workmanship, bad conduct, or other good cause. Each man was to work regularly, and miners earning designated amounts above \$100 a month, excluding expenses, were to accept a reduction in wages ranging from 10 to 40 per cent. On the part of the operators it was agreed not to discharge any man or officer for actions or duties imposed upon him by the Workingmen's Benevolent Association. For obtaining the monthly prices of coal upon which wages were based the president of the board of trade and the president of the association of Schuylkill County "shall meet (on the) 20th day (of) each month and select five operators, who shall, on the 25th instant following, produce a statement, sworn or affirmed to, of the prices of coal at Port Carbon for all sizes above pea coal. The five operators shall be selected from a list of those shipping over 40,000 tons annually, and none shall be selected a second time until the list is exhausted. The price of coal so obtained shall fix the rates of wages for that month." The agreement was signed by five operators and five miners.

It was not long, however, before charges of violating the agreement were made by each side against the other, following continued overproduction which kept both prices and wages low. When the working of the sliding scale in 1870 resulted in a decrease instead of an increase in wages, the leaders found it impossible to control the mine workers, and at the beginning of 1871 they went out on a strike which involved the entire anthracite region. In the Wyoming field, where the sliding scale had never been in force, the miners struck against a proposed reduction in wages equivalent to 34 per cent on contract work. Ignoring the association, the operators of the Schuylkill field attempted to treat directly with their employees, but in this they failed. Next they began the importation of new men to operate their mines, which action was followed by riots and the calling out of the militia. Securing possession of the arms of the soldiers, the miners marched to every mine where work had been resumed with nonunion men and compelled them to suspend operations.

On April 17, through the efforts of Eckley B. Coxe, an operator at Drifton, and President Siney, of the Workingmen's Benevolent Association, a joint committee of miners and operators, representing the three fields, met at Mauch Chunk in the hope of arbitrating the questions in dispute. The most important questions were those concern-

ing wages and, of course, the sliding scale; the attitude of the operators toward the miners' organization, and the interference of the association with nonunion men and with the operation of the mines. No agreement could be reached on any of these points by the committee, but one month later the decision of Judge William Elwell, who had been previously agreed upon as umpire, proved satisfactory to both sides to the dispute and mining operations were resumed. In the umpire's decision the sliding scale for the Schuylkill field was to be 1 cent for each 3 cents rise and fall in the price of coal, with a \$2.75 basis, but if the price of coal fell below \$2.25 there was to be no further fall in wages. The other questions were to be submitted to arbitration boards, one in each of the three fields, to be composed of three operators and three miners, with an umpire for each field, if such an official was found necessary.

Before the end of the year both operators and miners were disregarding the award. There were local strikes for increased wages, which some of the operators at once granted. At one or two collieries, when the price of coal fell below \$2.75, the miners refused to accept a corresponding reduction in wages. In not a few cases the advice of the leaders, who endeavored to hold the men to their agreement, was disregarded. Despite these and other difficulties the agreement was renewed at joint meetings of committees representing the board of trade and the Workingmen's Benevolent Association until 1874. For 1872 the basis was made \$2.50, and wages were not to fall below the price set for more than two months of the year. Prices and wages were fairly well maintained until the industrial depression, which began in 1873, could no longer be prevented from affecting prices and wages in the anthracite industry, and the operators proposed a reduction for that year of from 10 to 20 per cent. On January 1 a six months' strike was begun by the miners of the Lehigh and Schuylkill fields, which terminated in the complete surrender of the miners upon the terms of the operators. The Workingmen's Benevolent Association was destroyed, never to be heard from again, and it was to be many years before the anthracite mine workers were to recover sufficiently from their loss to attempt another such organization.

There were many causes that contributed to the failure of the trade-union movement in the anthracite region. Conspicuous among these was the inability of the parties to the agreement to control the acts of all producers of anthracite despite the fact that the exceedingly small area in which the industry was confined was conducive to the development of a strong organization among those engaged in hard-coal production. Within every industry there is always to be found a few individuals whose self-interest leads them into committing acts that ~~at~~ injure the industry as a whole. This was true of anthracite ~~duction~~ then as it is still, although to a less extent. The individual

operator, whose greater self-interest was in open and ruthless competition, could not be made to consider the greater good of the industry as a whole, and it is largely the fact that the organized operators and miners could not control this "independent" operator which explains the downfall of the early trade-union movement in the anthracite-coal industry. This "independent" operator was permitted to play the temporary self-interest of district against district, of operator against operator, and of miner against miner to his own selfish ends. Figuratively, he applied the spark to the already gathered fuel of race animosity and industrial competition. The result was the blazing up of a bitter feeling of enmity not only among the operators and among the miners themselves in the different districts and even within the same field, but between the two producing classes. Thus he was able to prevent the organized operators from gaining control not only of the anthracite markets but of coal production itself and, in consequence, of prices and wages. All during the attempt of 1868-1876 to work out some kind of a satisfactory cooperative plan of production only once were the mine workers of all the districts united in a common cause, and this was during the strike of 1875, when the industrial depression which had set in two years previous rendered it too late. Nor were the operators united. While as a class they had organized the Anthracite Board of Trade, it was confined, for the most part, to the operators in the Schuylkill and Lehigh fields, many of the Wyoming operators being beyond its jurisdiction. These "independent" operators were usually the ones who played havoc with the well-wrought plans of the miners' union and the operators' organization to benefit the greater number engaged in the industry. They did this in 1869 by temporarily advancing wages, when the Lehigh and Schuylkill miners suspended work to deplete the oversupplied markets. The object, of course, was to increase their output and thus their profits at the expense of their fellow-operators in the lower fields. The same thing happened in 1870. When the Schuylkill men, in that year, again entered upon a suspension, the Wyoming and Lehigh miners kept at work through a compromise with their employers. In 1871, when the Wyoming operators found they could not pay these higher wages while all three fields were in operation, they attempted a reduction, which the miners opposed by instituting a strike. Believing they now had an opportunity to unite the mine workers of all three fields the Schuylkill miners, despite the agreement they had entered into with their operators, joined the Wyoming men on strike. With the entire region idle the self-interest of the operators in the Wyoming field led them to offer their men the old rates of wages, and they attempted to resume work after a four weeks' strike.

There now entered into the situation another contributing cause of the overthrow of the trade-union movement among the anthracite

miners. This was the railroads, which heretofore had confined their operations to the transportation of coal, buying coal lands, and entering upon mining operations. The repeated strikes and suspensions and lockouts had made the transportation of coal so uncertain that the revenues of the railroads were considerably affected by the unexpected withdrawals of shipment and the interference with the business of the companies which resulted from the industrial disturbances. The interests of the railroads—that of the Reading in particular, which had entered the region as early as 1842—now seemed to point to the proprietorship of the mines if they were to be certain of the product for transportation, as other railroads were rapidly being built into the region and were beginning to compete for the traffic. The first indication of the changed policy of the railroads was in the raising of freight rates on coal (the Reading trebled its rates) when the operators attempted to resume mining in 1871. This made the price of anthracite too high in the markets and of course stopped its production. The railroads had the upper hand in the contest which was now begun, through their control of freight rates, which a legislative committee, appointed to investigate the situation, declared was not being exercised illegally. Many of the operators were forced to sell to the railroad companies, beginning a period of rapid railway purchase of coal lands with the present-day result that there are now fewer than seventy-five “independent” operators in the entire region. This direct entrance of the transportation companies into the situation brought a more determined and bitter opposition to the miners’ organization and contributed materially, within a very few years, to the overthrow of the Workingmen’s Benevolent Association.

By this time the organization itself had become greatly weakened through dissensions among the members of the different districts. The Schuylkill miners were constantly complaining that they could put no faith in the men of the northern field. In fact, the Schuylkill mine workers refused to abide by the joint agreement of 1871 unless they could be assured that the Wyoming and Lehigh employees would observe good faith with them. Otherwise they threatened to make their own agreements with the operators regardless of the interests of the other mine workers. It was a heterogeneous mass of men with which the leaders had to deal, the different races presenting complicated interests that required the best efforts of the ablest men to harmonize, and when the direction of the anthracite miners passed into the hands of John Siney, who was elected to the presidency of the Miners’ National Association in October, 1873, it needed no prophet, even at that day, to foretell the end of the Workingmen’s Benevolent Association. The success of previous strikes, the adoption of the sliding scale, the passage of the first mine-inspection law, and the securing of other direct advantages for the mine employees had led

the officers into a too arrogant use of their power. They caused their organization to become embroiled in politics, and the interests of the mine workers were in consequence soon being injured by political parties playing the miners and operators against each other.

Where public sympathy with the movement was not lost in these ways it was greatly weakened by the widespread lawlessness which prevailed throughout the region about this period. Much of it necessarily accompanied the numerous strikes set in action by the Workmen's Benevolent Association, but to this organization was also attributed, by an indiscriminating public, the burning of breakers and the scores of murders committed by the "Mollie Maguires," a secret, oath-bound organization which flourished in the region from 1866 to 1876.^a Although the association had no direct relation with the society yet some of the members of the former belonged to the "Mollie Maguires," and when the terror which the depredations of the latter had given rise to was relieved by the conviction and hanging of the criminals, public indignation was skillfully directed in taking vengeance upon the miner's organization.

The quarter of a century following the destruction of the Workmen's Benevolent Association in 1875 has little of interest in tracing the trade-union movement among the anthracite miners. For the greater part of this period the great body of mine workers remained unorganized. Here and there local or sectional unions would spring up and now and then grow formidable, but never sufficiently strong to restore the joint conference plan for regulating wages and conditions of employment. In 1886 the Miners and Labor-

^a The "Molly Maguires" were principally Irish immigrants, who brought the society with them from Ireland, where it had been formed as the Ancient Order of Hibernians, under Robert Emmet, for the purpose of freeing their native land from British control. None but Catholics were eligible to membership and despite the opposition of the Catholic church and its priests in the anthracite region, the society continued in existence nearly ten years with the worst possible elements in control. Its secret meetings, which planned murder and incendiarism, were conducted with solemn religious rites, and its vengeance seemed to be directed mainly against mine superintendents and bosses. A number of murders of such officials were traced to the society, but in every case alibis would be sworn to in the trial by other members of the society and convictions were rare. So daring did they become, and so atrocious were the crimes committed that detectives were employed to ferret out the criminals. One of these was John McParlin, an Irishman and a Catholic, who succeeded, in 1873, in becoming a member of the society under the name of James McKenna. He continued a member for three years before his real purpose was discovered and he was forced to flee. He had gained the confidence of the leaders, however, and had become secretary of the Shenandoah branch of the society. The evidence he was thus able to furnish of the operations of the society led to the arrest of 70 members. With his mass of undisputed testimony and through some of the prisoners turning state's evidence, 12 members of the society were convicted of murder in the first degree, 4 of murder in the second degree, 4 of being accessory to murder, and 6 of perjury.

ers' Amalgamated Association, which had been formed among the Lehigh and Schuylkill miners about 1878, and the Knights of Labor, which had entered the Wyoming field about the same year, joined their forces in an attempt to correct some of the abuses invariably growing out of the absence of a strong union among the men. A joint committee of the two organizations gained slight advances in wages from the Reading company. In the following year they demanded of the Lehigh operators that the basis of the sliding scale, which had never been formally abandoned, be made \$4 instead of \$5, with other changes which were intended to benefit the miners. An unsuccessful strike followed in that district. In January, 1888, a seven weeks' strike against the Reading company failed. Both organizations of mine workers were destroyed for all practical purposes.

By 1900 we find the United Mine Workers of America with about 8,000 members in the three anthracite districts, being strongest in the Wyoming field. This was the first national organization of miners to include the anthracite mine workers in its membership. It began a six weeks' strike among the hard-coal miners on September 17, of that year, which involved, before its close, 130,000 of the 140,500 men and boys then employed in the industry. A 10 per cent increase in wages, including in the Wyoming and Lehigh fields a reduction in the price of powder from \$2.75 to \$1.50 a keg, and the abolishment of the sliding scale in the Lehigh and Schuylkill fields were secured along with other improved conditions of employment. In the eighteen months that followed, the officers of the United Mine Workers made numerous and repeated attempts to secure the adoption, by the railroad mining companies, of the joint conference plan for deciding upon wages and general conditions of employment, but all of them met with failure, the presidents of the mining companies refusing to enter into such an arrangement. Finally, on May 12, 1902, another strike laid the entire anthracite region idle for more than five months. The formal demands of the mine workers were for a 20 per cent increase in wages for contract miners, a reduction of 20 per cent in the hours of labor of per diem employees, the establishing of 2,240 pounds as a mining ton, and the submission of all questions at issue to disinterested parties for arbitration. The real issue, however, came to be the recognition of the union. Through the mediation of President Roosevelt the miners resumed work on October 23, with the understanding that the questions in dispute would be submitted to a commission appointed by the President. After a five months' investigation of the conditions this Commission^(a) reported on March 18, 1903, granting a 10 per cent

^a This Commission was composed of Judge George Gray, chairman; Hon. Carroll D. Wright, Gen. John M. Wilson, Bishop John L. Spalding, Mr. Edgar E. Clark, Mr. Thomas H. Watkins, and Mr. Edward W. Parker.

increase in wages to contract miners and certain other specified classes of employees, and a reduction of hours of labor to those employees paid by the hour, day, or week; reestablished a sliding scale; presented a plan for the employment of check weighmen and check-docking bosses, and provided for a permanent joint committee of six, three representatives of the operators and three of the miners, to be called a board of conciliation.

Although the Commission in its report states that it does not consider the question of recognition of the United Mine Workers to come within the scope of its jurisdiction, nevertheless this union is virtually recognized in that provision for the board's organization, which provides that "if there shall be a division of the whole region into three districts, in each of which there shall exist an organization representing a majority of the mine workers of such district, one of said board of conciliation shall be appointed by each of said organizations." This committee is to have referred to it any difficulty or disagreement arising under the Commission's award, whether as to its interpretation or application, or in any way growing out of the relations of the employers and employed, which can not be settled or adjusted by consultation between the superintendent or manager of the mine or mines, and the miner or miners directly interested or is of a scope too large to be so settled or adjusted. It is provided that this board of conciliation shall take up and consider any question referred to it as aforesaid, hearing both parties to the controversy, and such evidence as may be laid before it by either party; and any award made by a majority of the board is to be final and binding on all parties. In case the board is unable to decide any question submitted or point related thereto, that question or point is to be referred to an umpire, to be appointed, at the request of the board, by one of the circuit judges of the third judicial circuit of the United States, whose decision is to be final and binding in the premises. The membership of the board is at all times to be kept complete, either the operators' or miners' organization having the right, at any time when a controversy is not pending, to change their representation thereon. At the hearings before the board the parties may be represented by such person or persons as they may respectively select. No suspension of work is to take place, by lockout or strike, pending the adjudication of any matter so taken up for adjustment.^(a) This board has since been organized by the operators of each district selecting a representative and by the miners choosing the president of the United Mine Workers in each of the three districts. How far this board will succeed in accomplishing the arduous task which lies before it is a question for the future.

Although a foundation is thus being laid in the hard cold region upon which some kind of a joint conference structure is likely sooner

^a Pages 67 and 68, Report on the Anthracite Coal Strike of 1902.

or later to be erected, the 147,000 hard coal mine employees, a majority of whom are members of the United Mine Workers, do not at present work under joint agreements as to wages and conditions of employment; nor does the larger number of coal mine employees in Colorado, Arkansas, Indian Territory, New Mexico, Washington, Montana, Texas, Michigan, Maryland, Virginia, West Virginia, and the central and western Pennsylvania soft coal fields. In at least 10 of the more important of the 28 coal-producing States, however, the trade union movement between the employers and the employed in the coal mining industry has reached the point of joint annual bargaining for the purchase and sale of mine labor and the conditions of the same. These are Ohio, Indiana, Illinois, and western Pennsylvania, included in the interstate movement of the central competitive territory—Iowa, Kansas, Missouri, and to a lesser extent Kentucky, Tennessee, and Alabama. Some agreements are also entered into in the central Pennsylvania field, and in portions of West Virginia, Michigan, and one or two other States. In brief, of the 485,000 coal mine employees of the United States in 1902, producing in that year 300,000,000 tons of coal, about 275,000 are members of the United Mine Workers of America, and of the latter about 150,000 work under agreements with their employers. According to claims of the officials of the organization about 75 per cent of all the mine workers in the United States are members of the union; more than 85 per cent of the total of 485,000 are governed by union scales and work under its conditions of employment, while fully 90 per cent of all the mine employees would go out on strike if the United Mine Workers decided a national suspension of coal mining to be necessary.

In this study of the trade union movement among the coal mine workers the attempt has been made to point out the causes of the failures and successes which have, at different times, marked its growth. In any consideration of the present phenomenal success of the United Mine Workers of America it should not be forgotten that it has come about during a period of remarkable industrial activity which of itself would have brought to the mine employees some if not all of the increased wages and improved conditions of employment which they now enjoy. While this organization has been the means of accomplishing great good, it is believed that the real test of its permanency and continued usefulness will come, as it has always come to similar organizations, during a period of industrial depression when wage reductions set in to accompany a general fall in prices. If the organization is able, under such conditions, to hold the men together and to observe inviolate the terms of its agreement with the employers, no greater test is likely to be required of it. We have seen that no other coal miners' organization has ever been able for long to meet this test.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

[It is the purpose of this Bureau to publish from time to time important agreements made between large bodies of employers and employees with regard to wages, hours of labor, etc. The Bureau would be pleased to receive copies of such agreements whenever made]

AGREEMENT BETWEEN PHILADELPHIA TYPOTHETÆ AND PHILADELPHIA TYPOGRAPHICAL UNION NO. 2.

This agreement, made the first day of December, A. D., 1903, between the Typothetæ of Philadelphia, hereinafter called the party of the first part, and Philadelphia Typographical Union No. 2, hereinafter called the party of the second part:

Witnesseth, that the parties hereto, for the purpose of preventing confusion and misunderstanding between themselves, and for the purpose of establishing a permanent scale of wages to be paid to the party of the second part, promise and agree that the scale of wages hereto attached is accepted and shall go into force on the first day of January, 1904, and shall continue in force as specified, viz.:

An increase of \$1 per week on the scale for time workers (making the minimum \$17 per week), and an increase of \$1 per week on the scale for linotype operators (making the minimum \$19 per week), to take effect January 1, 1904; and a further increase of \$1 per week on each of the above (making the minimum scale for time workers \$18 per week and the minimum scale for linotype operators \$20 per week), to take effect October 1, 1904, this to be the prevailing rate until May 31, 1905.

The members composing the party of the first part agree to pay to the members of the party of the second part employed by them wages at the said scale.

The members of the party of the second part promise and agree to work for and accept wages at the said scale, and to make no demand for increase of wages or changes in the hours of employment, or any other demand whatsoever, upon the party of the first part during the term of this agreement.

IN REFERENCE TO THE EIGHT-HOUR DAY.

It is agreed that all questions as to a shorter work-day shall be subject to and governed by such agreement or settlement as may in the future be arrived at through joint conference of the United Typothetæ of America and the International Typographical Union.

The party of the second part agrees to furnish to the party of the first part a printed copy of all shop rules and regulations under which composing rooms are to be operated, and the said rules and regulations shall not become operative until they have been approved by the party of the first part.

A board of arbitration shall be created under this agreement to consist of three members from the party of the first part and three members from the party of the second part, who shall each have plenary powers over the party of the second part and plenary powers over the party of the first part. Such board of arbitration shall have power to adjust, settle and regulate all differences arising between the parties to this agreement not herein provided for. Said board of arbitration shall settle all questions coming before it on a fair and common sense basis. Should they be unable to determine any question, they shall have power to call in an impartial arbitrator whose decision shall be final. No question submitted to this board for settlement shall be considered under fifteen days unless by the unanimous consent of the board. All questions submitted to this board must be in writing, and may be handed to any member of the board, whose duty shall be to immediately convey notice to each of the other members.

It is mutually agreed that the terms of this agreement shall continue in force for a further period of two years from May 31, 1905, unless either party hereto shall, before March 1, 1905, notify the other party in writing of its intention to terminate the same.

LANSTON MONOTYPE MACHINES.

The question of piecework on Lanston machines is, under this contract and scale, left open for future adjustment between these two organizations or such committees or arbitrators as shall be duly appointed by them.

In witness whereof, the parties hereto have hereunto set their official seals, duly attested the day and year first above written.

For Typographical Union No. 2,

ALFRED D. CALVERT,
President.

CHARLES S. CLAYTON,
Secretary-Treasurer.

For the Philadelphia Typothetæ,

EDWARD STERN,
President.

E. LAWRENCE FELL,
JOHN MACINTYRE,
Recording-Secretaries.

C. H. CLARKE.

A. H. SICKLER.

W. A. MACCALLA.

T. S. LEACH.

AGREEMENT BETWEEN TYPOTHETÆ OF PHILADELPHIA AND PHILADELPHIA PRINTING PRESSMEN'S UNION NO. 4.

This agreement, made the twenty-fifth day of February, A. D., 1903, between the Typothetæ of Philadelphia, hereinafter called the party of the first part, and the Philadelphia Printing Pressmen's Union No. 4, hereinafter called the party of the second part:

Witnesseth, that the parties hereto, for the purpose of preventing *confusion* and misunderstanding between themselves, and for the purpose of *establishing a permanent scale of wages to be paid to the party*

of the second part, promise and agree that the scale of wages hereto attached is accepted and shall go into force on the seventh day of September, 1903, and shall continue in force until May 31, 1905.

The members composing the party of the first part agree to pay to the members of the party of the second part, employed by them, wages at the said scale.

The members of the party of the second part promise and agree to work for, and accept, wages at the said scale, and to make no demand for increase of wages or changes in the hours of employment, or any other demand whatsoever, upon the party of the first part during the term of this agreement.

The party of the second part agrees to furnish to the party of the first part a printed copy of all shop rules and regulations under which press-rooms are to be operated, and the said rules and regulations shall not become operative until they have been approved by the party of the first part.

A board of arbitration shall be created under this agreement to consist of three members from the party of the first part and three members from the party of the second part, who shall each have plenary powers over the party of the second part and plenary powers over the party of the first part. Such board of arbitration shall have power to adjust, settle and regulate all differences arising between the parties to this agreement not herein provided for. Said board of arbitration shall settle all questions coming before it on a fair and common sense basis. Should they be unable to determine any question, they shall have power to call in an impartial arbitrator whose decision shall be final. No question submitted to this board for settlement shall be considered under fifteen days, unless by the unanimous consent of the board. All questions submitted to this board must be in writing, and may be handed to any member of the board, whose duty shall be to immediately convey notice to each of the other members.

It is mutually agreed that the terms of this agreement shall continue in force for a further period of two years from May 31, 1905, unless either party hereto shall, before March 1, 1905, notify the other party in writing of its intention to terminate the same.

In witness whereof, the parties hereto have hereunto set their official seals, duly attested the day and year first above written.

In the presence of
E. LAWRENCE FELL,
WM. F. FELL,
A. H. SICKLER,
J. R. HATHAWAY,
FRANK J. HOLBY,
MORTON B. HIRSHY,
JOHN MACINTYRE.

For the Philadelphia Typothetæ,
EDWARD STERN,
President.
MARTIN P. HIGGINS,
Pres. I. P. P. A. U.
JAMES E. CALLERY,
Pressmen's Union No. 4.
RALPH EZEKIEL.
HARRY J. WIGO.
FRED MCCARTHY.

SCALE OF WAGES REFERRED TO IN THE FOREGOING AGREEMENT.

Cylinder pressmen shall receive not less than nineteen dollars (\$19) per week for running not more than two flat bed presses. Bed and platen pressmen shall receive not less than sixteen dollars (\$16) per week.

Pressmen working on presses with self-feeding attachments shall receive not less than twenty-one dollars (\$21) per week for running two presses of that character.

Pressmen in charge of web presses in book and job offices shall receive not less than twenty-five dollars (\$25) per week for running one press, twenty-two dollars (\$22) per week for the first three months and then the full wage scale.

Fifty-four hours shall constitute a week's work; said hours of labor shall be between the hours of 7 a. m. and 6 p. m. In all cases time after 6 p. m. shall be computed as overtime.

Overtime work between the hours of 6 o'clock p. m. and 12 o'clock midnight, and on the following holidays: New Year's Day, Memorial Day and Thanksgiving Day, shall be paid for at the rate of time and half-time. Overtime work between the hours of 12 o'clock midnight and 7 o'clock a. m. and on the following holidays: Fourth of July, Labor Day, and Christmas Day, and on Sunday, shall be paid for at the rate of double time.

A pressman who loses time with permission of his employer shall not be docked more than the regular scale of wages.

The foreman of the press room is to be recognized as the one in authority.

AGREEMENT BETWEEN THE TYPOTHETÆ OF PHILADELPHIA AND THE PHILADELPHIA PRINTING PRESS ASSISTANTS' AND JOB PRESSMEN'S UNION NO. 11.

This agreement, made the twenty-eighth day of October, A. D., 1903, between the Typothetæ of Philadelphia, hereinafter called the party of the first part, and the Philadelphia Printing Press Assistants' and Job Pressmen's Union No. 11, hereinafter called the party of the second part:

Witnesseth, that the parties hereto, for the purpose of preventing confusion and misunderstanding between themselves and for the purpose of establishing a permanent scale of wages to be paid to the party of the second part, promise and agree that the scale of wages hereto attached is accepted and shall go into force on the first day of January, 1904, and shall continue in force until May 31, 1905.

The members composing the party of the first part agree to pay to the members of the party of the second part, employed by them, wages at the said scale.

The members of the party of the second part promise and agree to work for, and accept wages at, the said scale, and to make no demand for increase of wages or changes in the hours of employment, or any other demand whatsoever, upon the party of the first part during the term of this agreement.

The party of the second part agrees to furnish to the party of the first part a printed copy of all shop rules and regulations under which press-rooms are to be operated, and the said rules and regulations shall not become operative until they have been approved by the party of the first part.

A board of arbitration shall be created under this agreement to consist of three members from the party of the first part and three members from the party of the second part, who shall each have *plenary powers* over the party of the second part and plenary powers over

the party of the first part. Such board of arbitration shall have power to adjust, settle and regulate all differences arising between the parties to this agreement not herein provided for. Said board of arbitration shall settle all questions coming before it on a fair and common sense basis. Should they be unable to determine any question, they shall have power to call in an impartial arbitrator whose decision shall be final. No question submitted to this board for settlement shall be considered under fifteen days unless by the unanimous consent of the board. All questions submitted to this board must be in writing, and may be handed to any member of the board, whose duty shall be to immediately convey notice to each of the other members.

It is mutually agreed that the terms of this agreement shall continue in force for a further period of two years, from May 31, 1905, unless either party hereto shall, before March 1, 1905, notify the other party in writing of its intention to terminate the same.

In witness whereof, the parties hereto have hereunto set their official seals duly attested the day and year first above written.

E. LAWRENCE FELL,
T. S. DANDO,

For the Typothetæ of Philadelphia.

THOMAS E. KELLEY,
JOSEPH J. MCGARRY,

*For Philadelphia Printing Press Assistants'
and Job Pressmen's Union No. 11.*

Witness present and referee in arbitration,

ALFRED D. CALVERT.

SCALE OF WAGES WHICH HAS BEEN ADOPTED AS PER FOREGOING AGREEMENT.

	Per week.
Cylinder press feeders	\$10. 00
Cylinder press feeders (perfecting)	11. 50
Helpers (automatic feeder) on one or two machines	11. 50

Job pressmen.

	Per week.
Running one platen press	\$10. 00
Running two platen presses or more	12. 00

Fifty-four hours to constitute a week's work.

Hours of labor to be between 7 a. m. and 6 p. m.

Overtime to be time and half-time to 12 p. m. and double time thereafter.

Night work: Fifty hours to constitute a week's work.

Holidays to be paid for as follows: Time and half-time on New Year's, Memorial Day, and Thanksgiving. Double time to be paid for work on Fourth of July, Labor Day, and Christmas Day.

A feeder or job pressman who loses time with permission of his employer shall not be docked more than the regular scale of wages.

The foreman of the press room is the one to be recognized as the one in authority.

ARBITRATION.

As has been the case so frequently in the past, the representatives of the Typothetæ and of the Printing Press Assistants' and Job Pressmen's Union were unable to reach a mutually satisfactory agreement, and the matter was finally referred by both parties to Mr. Alfred D. Calvert, President of Philadelphia Typographical Union No. 2, as

Comment. The purpose of this rule is that there may be no interference with business.

Sec. 2. Grievance committee of shops not to meet oftener than once a week.

Comment. The committee need not meet once a week unless it has business.

RULE 5. Pending the discussion and decision of any difference or dispute, there shall be no lockout, strike, stoppage or cessation of work by either employer or employed.

Comment. It is the object of this rule to substitute reason and right instead of violence, in whatever form, by either employer or employed; and during no dispute or difference shall the work in any shop or department of it be stopped or interfered with.

If the interests of parties can not be so adjusted and harmonized that the parties can continue the relations of employer and employee, then, according to the real or supposed interests of the parties, they must separate, not in violence, but according to reason. This rule implies that in no case is it necessary to resort to lockouts, strikes or violent means in any form, it being the office of reason, acting according to the golden rule, to adjust and settle all human interests.

RULE 6. In case of a disagreement between employer and employee it shall be the duty of the grievance committee to settle, if possible, the matter in dispute; but in the event an agreement can not be reached the matter in dispute shall be submitted to the board of arbitration.

Comment. This rule is sufficiently plain without explanation.

RULE 7. There shall be no interference with the employment or wages of hands hired by the week, when the wages are satisfactory to the employer and employees, so that competent workmen may be protected.

Comment. Business requires that some "hands be hired by the week," and that wages are paid to the skill of the hand. It is the object of the rule to protect both the laborer and the manufacturer.

It is to give to the manufacturer the advantage of skilled labor, and to give to skilled labor a just remuneration. Of course the manufacturer may employ inferior skill and give it inferior remuneration. This may be important at some times, and for some purposes. It is the right of the manufacturer to determine how his business shall be conducted. Capital and labor should each receive its equitable reward.

If the wages are not satisfactory the hand may quit work; and if not satisfactory to the employer he may dismiss him.

With any other rule business could not be safely carried on.

RULE 8.—Section 1. The joint board of arbitration shall consist of seven members of the Manufacturers' Association actively engaged in manufacturing and seven employees working for members of the Manufacturers' Association; must come uninstructed, hear testimony, examine witnesses, and decide on the merits of the case. Said members shall serve for one year or until their successors are appointed or elected. Five members from each side shall constitute a quorum. A majority vote shall be final in all cases.

Sec. 2. No person shall be questioned or held accountable as individuals or as members of any organization for their actions or doings as arbitrators.

Comment. Seven manufacturers and seven employees compose the board. These are appointed by the respective associations. It is

required that the members of the joint board shall each be actively engaged as manufacturers of the association or actively engaged as employees of manufacturers of the association; were it otherwise manufacturers or employees might be eligible whose interest it would be to create strife rather than to promote harmony. Members of the joint board form what is similar to a jury, and what jury could give a fair verdict if its members were instructed how to decide before hearing the testimony?

Each arbitrator must be guaranteed that his freedom of opinion and conscientious action as an arbitrator will be fully protected by both the association of employers and employees; otherwise, qualified parties might hesitate to accept the position or act as their judgment and conscience dictated. When by the sides there is a difference of opinion, the same number of persons only on each side shall cast a vote. But when the vote is not by sides all at the meeting may vote, and the majority decides the question.

RULE 9. In case of a tie vote, each side shall select a disinterested person, and these two shall select a third person, and their decision shall be final.

Comment. In a warm contest both parties might not agree to a third person, and hence the provision of the rule. When the three persons are chosen, the majority vote cast by them shall be decisive and final.

RULE 10. The joint board of arbitration shall meet semimonthly, at such time and place as may hereafter be agreed upon. No complaints shall be considered unless stated in writing, and the causes of complaint are specified and signed by the complainant.

Comment. All parties seek to avoid trivial complaints. The rule requires the complaint to be in writing, in order that the person may see it in that form, and that the board may have something definite before it.

RULE 11. Complaints shall be presented to the board at the first meeting after the cause thereof shall arise, or it will be deemed that there are no grounds for complaint.

Comment. This rule is vigorous and might work hardship if the cause of complaint should arise just before a meeting. But there should be no delay. It is improper to introduce stale complaints.

RULE 12. No bill of wages will be received from any organization, but all bills shall originate with and be presented by either employer or employee on or before October 1 of each year, where any changes are desired, and shall be settled by November 1, to take effect 1st December following, and continue in force one year.

After the bill of wages has been presented the employer shall adjust with each full branch the difference asked by either party, and when all have been adjusted the shop organization shall approve and attest the bill. Up to this point there shall be no interference permitted on the part of the Manufacturers' Association or any other organization; but in case the difference can not be mutually adjusted by the employer and any branch or branches, these points of difference shall be stated in writing and submitted to the joint board of arbitration, and their decision shall be final and binding on both parties.

Where no bill is presented by October 1 of any year the old bill shall continue in force for another year, except in change of system, or introduction of machinery or new work between dates of annual

settlement of bills; in these cases the prices fixed shall be for the balance of term of general contract.

Comment. This rule recognizes the fact that the employer and employees of any branch know better what facilities there are for doing each kind of work in a factory, and what the labor is worth as it is given to them, than any outside party can, and also that their judgment is fair and not influenced by those whose interest it might be to interrupt instead of give them employment.

RULE 13. It is the manufacturer's exclusive right without arbitration to use whatever stock he thinks proper, to introduce whatever machinery he deems necessary, and divide and subdivide his work as he sees fit or his business may require, and it is the right of the employee to be paid just wages for the labor performed by him.

Comment. In order that a manufacturer may originate improvements and adopt those of others to meet competition of other localities, he must be guaranteed that he can manage his business without interference. On the other hand, these new demands must not encroach on just remuneration of the employee, but he must be paid for the labor he does.

RULE 14. The minutes of each meeting of the joint board of arbitration must be printed and posted in each factory within five days from the date of meeting.

Comment. That all employers and employees may be fully informed of the proceedings and decisions of the joint board of arbitration.

Addendum. If any difference shall arise hereafter touching any matter not provided for in the foregoing rules, such difference shall go before the board of arbitration for adjustment and decision.

AGREEMENT BETWEEN PHILADELPHIA MEMBERS OF NATIONAL FOUNDERS' ASSOCIATION AND IRON MOLDERS' UNION OF NORTH AMERICA.

August 7th, 1903.

Whereas, the molders of Philadelphia have asked to have a minimum rate of wages of \$3.25 per day of nine hours, in place of the existing rate of \$2.90 per day of ten hours for all day workers, and a twenty per cent advance on all piece prices for a nine hour work day, and the coremakers have asked for a minimum rate of \$3.00 per day of nine hours for all day workers in place of the present rate of \$2.50 per day of ten hours;

Whereas, the foundrymen of Philadelphia believe that such an increase is without precedent and unfair; therefore, be it

Resolved, That this conference agrees as follows: The work day in the foundries of Philadelphia shall be nine hours for each day of the week and the minimum wages to be \$2.90 per day of nine hours.

Resolved, That this agreement go into effect as of June 3rd, 1903, and remain in force until June 3rd, 1904.

Resolved, That on June 3rd, 1904, the minimum wage rate for molders per day of nine hours is to be increased to \$3.00 per day.

Resolved, That on June 3rd, 1904, the minimum wage rate for skilled journeymen coremakers is to be increased to \$2.75 per day of nine hours. This is to apply in jobbing and machinery foundries only; the present rate of wages being paid to skilled journeymen coremakers is to be continued in force from June 3rd, 1903, until June 3rd, 1904.

Resolved, That all other existing conditions in the different foundries remain the same as during the past year and if there have been any conditions created which are obnoxious or objectionable to either employer or employee, the same are to be the subject of immediate investigation and correction by the representatives of the respective organization.

(Note—The “existing conditions” referred to in the foregoing paragraph are as follows:

Article IV: The standard minimum wage rate shall be subject to the following differentials:

1st. The young man who has completed his apprenticeship and who, by reason of his mechanical inferiority or lack of experience, or both, in either branch of the trade of molding shall be unfitted to receive the full wage rate provided for above, shall be free to make such arrangements as to wages with his employer for a period mutually satisfactory as may be agreeable to himself and employer.

2nd. The molder who, by reason of his physical incapacity or physical infirmity, can not earn the standard minimum wage rate is to be free to make such arrangements as to wages as may be mutually satisfactory to the employer and himself.

3rd. There being in some foundries a grade of work calling for less skill than is required by the ordinary molder, this grade of work being limited in quantity, it is agreed that nothing in this agreement shall be construed as prohibiting the foundrymen from employing a molder to make such work and paying for same at a rate that may be mutually agreed upon between the molder and foundrymen. It is understood that a molder who is working for and receiving a rate of wages of twenty-seven and one-half (27½) cents per hour, or over, is not to be asked or expected to make the grade of work referred to above for any less wage rate than he is regularly entitled to under this agreement. This does not give the molder the right to refuse to make the work if it is offered to him at his regular wage rate.

Article V: It is agreed that nothing in the foregoing shall be construed as prohibiting piece or premium work, and when it is desired on the part of the foundryman that his work shall be done under the piece work or premium system it is agreed that the wages of the molder shall be based so that he may earn a wage not less than if working by the day. This is understood as applying to molders who are competent to do an equal amount of work and of equal quality to the average molder in the foundry in which he is employed. (a)

Where the foundryman and molder can not agree on the piece price for a certain piece of work the foundryman is to have the work done by the day for a period of a day or more—according to the nature of the work—in order to establish a fair and equitable wage rate on the work in question.

It is further agreed that nothing in this agreement shall be construed as preventing a molder from agreeing with his employer on a piece price as soon as he is given a pattern.

Article VI: Time and half time shall be paid for all overtime excepting in cases of accident or causes beyond control consuming not more than thirty (30) minutes; and double time for Sundays and legal holi-

^a At a meeting of Local Union No. 111, I. M. U. N. A., held on August 8, 1903, a resolution was unanimously adopted “that the limit which exists at the present time on the earning capacity of the piece-work molder be abolished.”

days, to wit: Fourth of July, Labor Day, Thanksgiving Day and Christmas. It being further understood that when foundries do not make a practice of running beyond bell or whistle time and are occasionally late, the "give and take" system shall apply in all such cases, it being understood that both sides should show a spirit of fairness in adjusting matters of this kind.

Article VII: Arbitrary limitations of output on the part of the molders, or arbitrary demands for an excessive amount of output by the molders on the part of the foundryman, being contrary to the spirit of equity which should govern the relationship of employer and employee, all attempts in that direction by either party—the molder or foundryman, are to be viewed with disfavor and will not receive the support of either of the respective associations parties to this agreement.

It being further agreed that the wage rates specified herein are to be paid for a fair and honest day's work on the part of the molder and that in the case of a molder feeling that a wrong has been done him by his employer, and that his treatment has been at variance with the terms of this agreement, he shall first endeavor to have the same corrected by a personal interview with his employer and, failing in this, that he shall report the same to the proper channel of his local union for its investigation. If there is any objectionable action on the part of the molder which is in conflict with this agreement or the spirit thereof, then the employer is to endeavor to point out to the molder where he is wrong, and failing in this, he may discharge the man for breach of discipline, or else retain him in his service and submit the case to the National Founders' Association for investigation.

In order that there may be no misunderstanding as to the wages a molder is to receive under the above agreement, it is understood that a molder must agree with the employer on the rate of wages that he is to receive at the time he is engaged; it being further agreed that neither the molder nor the foundryman is to deviate from the terms of this agreement as to wages or deportment.

Article VIII: It is agreed that all unfair or unjust shop practices on the part of the molders or foundrymen are to be viewed with disfavor by the Iron Molders' Union of North America and the National Founders' Association, and any attempt on the part of either party to this agreement to force any unfair or unjust practice upon the other is to be the subject of rigid investigation by the officers of the respective associations, and if upon careful investigation such charges are sustained against the party complained of, then said party is to be subject to discipline—according to the by-laws of the respective associations.

And it is further agreed that all disputes which can not be settled amicably between the employer and molder shall be submitted to arbitration under the "New York Agreement."

Article IX: When the words "employer" or "foundryman" are used, it is understood that their foreman or representatives may carry out the provisions of this agreement and act for them.

Article X: It is further agreed that nothing in the foregoing shall be construed as applying to operators of molding machines who have not learned the general trade of molding, and the right of a foundryman to introduce or operate molding machines in his foundry shall not be questioned.)

Resolved, That it is understood that any agreement reached by the two organizations of a national character, the same shall be made a part of this agreement.

This agreement shall expire June 3rd, 1905, and either party desiring a change at that time shall serve notice on the other thirty days in advance of the expiration of this agreement.

Signed on behalf of the Philadelphia members of the National Founders' Association—

(Sgd.) ANTONIO C. PESSANO.

Signed on behalf of the Philadelphia members of the Iron Molders' Union of N. A.—

(Sgd.) JOS. F. VALENTINE,
1st Vice-President.

It is mutually understood and agreed that when the advance in wages is given to the day-work molders the same percentage of advance is to be given to the piece workers, it being understood that the advance in wages to the day-work molders as well as the piece-work molders is to be June 3rd, 1904.

It is also further understood and agreed that ten cents per day is to be paid to each molder and coremaker working by the day who have been employed in the foundries of the members of the National Founders' Association since June 3rd, 1903, up to and including August 8th, 1903.

Signed on behalf of the Philadelphia members of the National Founders' Association—

(Sgd.) ANTONIO C. PESSANO.

Signed on behalf of the Philadelphia members of the Iron Molders' Union of N. A.—

(Sgd.) JOS. F. VALENTINE,
1st Vice-President.

NEW YORK AGREEMENT BETWEEN NATIONAL FOUNDERS' ASSOCIATION AND IRON MOLDERS' UNION OF NORTH AMERICA, CONFERENCE 1899.

Whereas, the past experience of the members of the National Founders' Association and the Iron Molders' Union of North America, justifies them in the opinion that any arrangement entered into that will conduce to the greater harmony of their relations as employers and employees, will be to their mutual advantage; therefore, be it

Resolved, That this committee of conference endorse the principle of arbitration in the settlement of trade disputes, and recommend the same for adoption by the members of the National Founders' Association and the Iron Molders' Union of North America, on the following lines:

That in the event of a dispute arising between members of the respective organizations, a reasonable effort shall be made by the parties directly at interest to effect a satisfactory adjustment of the difficulty; failing to do which, either party shall have the right to ask its reference to a committee of arbitration which shall consist of the presidents of the National Founders' Association and the Iron Molders' Union of North America, or their representatives and two other representatives from each association appointed by the respective presidents.

The finding of this committee of arbitration, by a majority vote, shall be considered final in so far as the future action of the respective organizations is concerned.

Pending adjudication by the committee on arbitration there shall be no cessation of work at the instance of either party to the dispute.

The committee of arbitration shall meet within two weeks after reference of the dispute to them.

AGREEMENT BETWEEN BUFFALO FOUNDRYMEN'S ASSOCIATION AND IRON MOLDERS' CONFERENCE BOARD OF BUFFALO AND VICINITY.

This agreement entered into this first day of October, 1902, by and between the Buffalo Foundrymen's Association, hereinafter called the party of the first part, on behalf of the firms whose names are hereto appended, and the Iron Molders' Conference Board of Buffalo and vicinity, hereinafter called the party of the second part, on behalf of the molders employed by the firms before mentioned, witnesseth:

1st. Beginning October 1st, 1902, the wages of all journeymen molders shall be advanced fifteen cents per day on their present wage rate, and the minimum rate of wages for all molders in the employ of said foundrymen shall be \$2.80 per day.

2nd. No molder to be reduced who is receiving more.

3rd. That overtime shall be paid for at the rate of time and one-half time, with double time for Sundays and the following holidays: Fourth of July, Labor Day, Thanksgiving Day and Christmas.

4th. There shall be a shop committee, composed of three members of the Iron Molders' Union, agreeable to both parties hereto, in each foundry, which shall be recognized by the party of the first part as the representative in the foundry of the party of the second part, for the purpose of official communication or the carrying out of the terms of this agreement.

5th. The party of the second part agrees that the molders shall at all times work faithfully and devote their entire working hours to the best advantage of their employers; and that all shop practices which work an injustice to the foundryman shall, upon his complaint to the shop committee, be investigated, and if injustice be found as alleged, the objectionable practice shall be removed. Should the decision of the shop committee not give satisfaction to the foundryman, he shall have the right to appeal to the business agent of the party of the second part, who shall personally make an investigation and endeavor to reach a satisfactory adjustment. Should the dispute still remain unsettled, either party to this agreement shall have the privilege of asking for its reference to a conference committee composed of three representatives each of the parties hereto, which shall proceed to the shop and endeavor to adjust the difference. Should adjustment again fail, a disinterested party, that is, a party identified with neither interest of the parties hereto, but satisfactory to both parties, is to be called upon to decide, and his verdict shall be accepted as final by both parties.

6th. Should machines be introduced by any foundryman, it shall be the duty of the molders to facilitate, as far as possible, their successful operation. It is further agreed that after the machine has been given a fair and practical test by the foundryman, his foreman, or any

competent union molder whom the foundryman may select, the foundryman or his foreman, in conjunction with the shop committee, shall fix the day's work, if it be decided to operate the machine under the day-work system, or the piece price, if it be decided to operate the machine under the piecework system. If after a fair trial by the molder, either the foundryman or his foreman, or the molder desire a change in said day's work or price, it shall be made the subject of further negotiation between the foundryman or his foreman and the shop committee. Should these further negotiations fail to effect a satisfactory adjustment, either party shall have the right to ask the reference of the desired change to the decision of a conference committee, as provided in the fourth clause of this agreement.

7th. The above agreement to continue and be in force until October 1st, 1903, and unless notice of a desire to change any of the conditions of this agreement be given by either party hereto at least thirty days previous to October 1st, 1903, the same shall remain in force until October 1st next following, and so on from year to year thereafter.

In agreement herewith we subscribe ourselves:

On behalf of the Buffalo Foundrymen's Association—

*On behalf of the Iron Molder's Conference Board of
Buffalo and Vicinity—*

NEW HAVEN AGREEMENT BETWEEN NATIONAL FOUNDERS' ASSOCIATION AND IRON MOLDERS' UNION OF NORTH AMERICA.

This agreement, made this 22nd day of January, 1903, between the National Founders' Association and the Iron Molders' Union of North America.

Witnesseth: That with a view of equalizing the average wages earned by the journeyman molders in the foundries of the members of the National Founders' Association making locks and hardware in Connecticut, and with a further view of endeavoring to harmonize the apparent variations in existing conditions, it is hereby agreed that commencing with February 1st, 1903, the following conditions shall prevail:

1st. The average wages earned by the journeyman molders working piecework in the foundries of the members of the National Founders' Association in Connecticut making locks and hardware shall not be less than \$2.75 per day, and the average molders shall not receive less than \$2.50 per day.

2nd. There shall be no limitation of output on the part of the molders employed in any of the foundries in which this agreement shall apply.

3rd. When a piece price has been established for any job it shall not be reduced during the life of this agreement, except that should a member introduce improved methods or facilities for molding, thereby increasing the output, which would warrant a readjustment, he shall be entitled to establish a new rate on the job, the same to permit the average earnings of the machine operator to be in conformity with clause one of this agreement.

4th. It is understood that during the life of this agreement there shall be no further attempt made by either party to introduce any conditions not herein provided for.

5th. This agreement to go into effect February 1st, 1903, and be and continue in force until February 1st, 1904, and should either party to this agreement desire any change or modifications of its terms, they shall notify the other party of the change or modifications desired at least 30 days prior to February 1st, 1904, and should no such notification be given to either party then this agreement shall continue in force for another year, and so on from year to year.

AGREEMENT BETWEEN THE FOUNDRYMEN OF DENVER AND IRON MOLDERS' UNION NO. 188.

This agreement, made and entered into between the Foundrymen of Denver, as herein represented, and Iron Molders' Union No. 188, as follows:

1st. That the Foundrymen of Denver, as herein represented, agree to grant to the members of Iron Molders' Union No. 188, the nine-hour day with the present ten-hour minimum, subject to the following agreements:

2nd. That all disagreements arising between the members of Iron Molders' Union No. 188 and their employers, will be referred to a committee consisting of three members each from the Foundrymen herein represented and Iron Molders' Union No. 188, whose duty it shall be in joint convention to settle all such disagreements, and in case they can not come to an understanding, they shall refer the matter to the National Committee of Iron Molders' Union and the National Founders' Association.

3rd. That the members of Iron Molders' Union No. 188 will make an honest endeavor to accomplish the same amount of work in nine hours as in ten hours. By honest endeavor is meant wherever it is not a physical impossibility. That the members will at all time cooperate with the employers to accomplish the best results in the foundry. That there will be no interference with any workman on the part of the shop committee, having in view the restriction of daily output.

4th. That Iron Molders' Union No. 188 will not allow its members to work in any shop not recognizing the jurisdiction.

5th. This agreement shall become operative within two days after receiving the approval of the National Headquarters of the representatives of Iron Molders' Union No. 188 and the National Founders' Association, and shall terminate on the first day of January, A. D., 1904.

6th. Upon violation of this agreement upon the part of members of Iron Molders' Union No. 188, or the foundries herein represented, this agreement shall become null and void.

DATED at Denver, Colorado, this ninth day of April, A. D. 1903.

AGREEMENT BETWEEN TWIN CITY FOUNDRYMEN'S ASSOCIATION OF ST. PAUL AND MINNEAPOLIS, MINN., AND IRON MOLDERS' UNION NOS. 176 AND 232.

MINNEAPOLIS, MINNESOTA, *May 28, 1903.*

We, the undersigned committees, representing the Twin City Foundrymen's Association, whose names are signed below, and Iron Molders' Union Nos. 176 and 232, believing that labor disputes and strikes and lockouts are disturbing factors in the foundry industry, and that they should be as far as possible eliminated, and that the question of labor is one of the most fruitful sources of such strikes or lockouts, do hereby agree on behalf of our respective firms and unions to be governed in determining the wages to be paid to molders, and in operating our foundries in the future, by the provisions of the following agreement:

1st. The distribution of hours shall be nine (9) hours per day for every working day.

2nd. The minimum rate of wages shall be two dollars and eighty-eight cents (\$2.88) per day for molders, and all molders now receiving more than \$2.88 per day shall have their rates readjusted so that they will receive as much for fifty-four hours work as they now receive for fifty-six hours, and when piece work is practiced, the molders shall be paid a rate that shall enable them to earn at least this minimum rate.

3rd. Pay days shall remain the same as at the present time.

4th. Any foundry that works overtime shall pay to its molders, time and one-half for such overtime from the regular quitting time until midnight, and double time thereafter, including Sundays, July 4th, Labor Day, Thanksgiving and Christmas. In case, however, overtime shall be caused by accident or causes beyond control, the overtime rate shall not begin until fifteen minutes after the regular quitting time.

5th. Machine molding as at present carried on shall not be disturbed during the life of this agreement.

This shall not deprive shops, which are not using machines at the present time, of putting in machines and using them under the conditions prevailing in the other foundries of the Twin Cities.

6th. The molders waive all rights of molding card sash weights, and employers shall be free to employ such men as they elect on washers, sleigh shoes and grate bars, providing molders refuse to perform said work or if molders can not be secured within one week after the shop committee has been notified.

7th. In all cases of dispute or grievance, the difficulty shall first be taken up with the foreman or proprietor of the shop in which the grievance arises, failing of a satisfactory settlement with the foreman or proprietor, the shop committee shall take up the matter promptly with the union. The union shall immediately thereafter appoint a committee, who shall investigate the grievance promptly and use all reasonable efforts to make a mutually satisfactory settlement, the molders shall remain at work and the proprietor shall not discharge them or lay them off.

8th. It is agreed that restriction of output shall not be countenanced in any way.

This agreement shall take effect June 1st, 1903, and remain in full force until May 1st, 1904. If either parties desire the abrogation of this contract, it shall give notice of the same, thirty (30) days prior to

the expiration thereof, otherwise it shall remain in full force for one year from the date of expiration thereof as herein provided.

It is understood that there are no agreements or understandings excepting as set forth in this instrument.

The above parties hereto pledge their best efforts to carry out this agreement in good faith.

Executed in behalf of the Twin City Foundrymen's Association and Iron Molders' Union Nos. 176 and 232 by their duly authorized representatives on this 28th day of May, A. D. 1903.

TWIN CITY FOUNDRYMEN'S ASSOCIATION.
IRON MOLDERS' UNION NOS. 176 AND 232.

AGREEMENT BETWEEN MANUFACTURERS' ASSOCIATION AND NATIONAL FOUNDERS' ASSOCIATION OF PITTS- BURG AND IRON MOLDERS' UNION OF NORTH AMERICA.

This agreement, made and entered into this thirtieth (30th) day of July, 1903, by and between a committee representing The Manufacturers' Association of Pittsburg and the members of the National Founders' Association of Pittsburg and vicinity, constituting the party of the first part, and a committee representing the members of the Iron Molders' Union of North America, in the Pittsburg district, party of the second part, for the purpose of securing and preserving just and equitable conditions of labor in the workshops of the first party, whereby the interests of the employer and employee shall be properly protected; and for the further purpose of avoiding strikes and lockouts by settling all disputes that may hereafter arise between the members of the parties hereto, during the term of this contract, in an amicable and equitable manner.

1st. That any disputes or difficulties arising between the parties hereto during the term of this agreement, shall be settled strictly in accordance with the New York agreement.

2nd. That nine (9) hours shall constitute a day's work. All time worked over nine (9) hours in any one day shall be considered overtime.

3rd. Time-and-half time shall be paid for all overtime, and double time shall be paid for Sundays, Fourth of July, Labor Day, Thanksgiving Day and Christmas.

4th. There shall be no restrictions or fines placed on a molder for the purpose of preventing him in any way from putting forth his best efforts to produce the best quality and quantity of work and receiving compensation accordingly.

5th. The party of the first part shall have the privilege of introducing molding machines and improved appliances of any kind in their foundries, and the right to have same operated by parties of the second part or any other parties they may find best adapted to operate said machines.

6th. That the party of the first part will refuse to employ any apprentice who has started his trade with another firm and has not completed his regular apprenticeship, unless said apprentice receives the consent of the firm he started his apprenticeship with. It is also agreed that apprentices shall be given work in all branches of the molding trade.

7th. The minimum rate of wages per day of nine (9) hours, during the term of this contract, shall be \$3 per day for journeymen molders

and coremakers working in machinery shops. It is understood, however, that this is not to affect coremakers who are at present working for less than \$3 per day, or establish any precedent in the ratio of wages between molders and coremakers and if at a national conference between the National Founders' Association and the Iron Molders' Union of North America, the minimum rate of coremakers should be fixed at a rate less than \$3 per day, the rate for all coremakers working under this contract shall be changed to that rate.

8th. An advance of 10 cents per day shall be paid to each journeyman molder and coremaker, beginning July 1st.

9th. It is further understood that any national agreement that may be perfected between the National Founders' Association and the Iron Molders' Union of North America, during the life of this agreement, shall go into effect at once, as between the members of these two associations, and that nothing in this agreement shall be understood as conflicting with any said national agreement.

10th. This agreement shall remain in force from July 1st, 1903, to July 1st, 1904, and thereafter, unless thirty (30) days' notice shall be given in writing, by either party, that they wish to terminate this agreement.

(Signed):

JOHN BARNETT,
THOS. F. CONNOLLY,
*For committee representing The Iron Molders' Union
of North America in Pittsburg and vicinity.*

GEO. MESTA,
ISAAC W. FRANK,
*For committee representing The Manufacturers' Association
of Pittsburg and the members of the
National Founders' Association of Pittsburg and
vicinity.*

PROPOSED STANDARD FORM OF AGREEMENT FOR JOBGING AND MACHINERY FOUNDRIES.

Agreement between the National Founders' Association (on behalf of its members) and the Iron Molders' Union of North America, (on behalf of its members belonging to Local Union No.)

1st. That in the event of a dispute arising upon the number of apprentices employed by a member of the National Founders' Association it shall be the duty of the officers of the two associations, or the general conference when assembled to adjust such dispute in an equitable manner, based upon the conditions prevailing at the time in the shop in which the dispute may arise.

2nd. There shall be no set day's work on the part of the molder or foundrymen.

3rd. There shall be no limitation of output on the part of the molder.

4th. There shall be no limit to a man's earning capacity, whether he is working by the day, by the piece or premium system.

5th. There are to be no fines or restrictions placed on a molder for the purpose of handicapping him or retarding him in any way from putting forth his best efforts to produce the best quality and quantity of work in the shortest time.

6th. The right of a foundryman to introduce molding machines, or improved appliances of any kind into his foundry shall not be questioned and it is to be optional with the foundryman as to whom he employs thereon, due consideration and preference being given to those who will produce the work for the least cost price.

7th. When castings are made under any other than the day-work system, the prices are to be so set, as to enable a molder to earn at least the rate of wages in the foundry in which he is working, except as provided in clause eleven of this agreement, and when a piece price is established, such piece price shall not be reduced excepting by improved facilities or agreement.

8th. All overtime to be paid for at the rate of time and one-half time and double time for Sundays and legal holidays. In case of delays due to accident causing a delay of one hour or less, or when a foundry is only occasionally late with its heats, the give and take principle is to apply and no allowance to be made for such time.

9th. There shall be no sympathetic strike or sympathetic lockout on the part of the molders or foundrymen.

10th. There shall be no strike or lockout in any of the foundries of the members of the National Founders' Association, wherein are employed members of the Iron Molders' Union of North America, without the consent in writing of the presidents of their respective organizations, no matter what the cause may be or the alleged provocation, on either side, the question in dispute must be submitted through the regular channels for adjustment and decision; pending this decision neither side shall take any arbitrary action. Should there be any breach of this rule and its provision or the spirit of the same violated, and result in a cessation of work by the members of the I. M. U. of N. A. in a body, or should there be a lockout ordered by the member of the N. F. A., then the members of the I. M. U. of N. A. so offending are to be expelled from membership, likewise the member of the N. F. A. so offending is to be expelled from the association.

11th. Basic wage rate, subject to differentials. The basic wage rate shall be based upon local conditions and be subject to the following differential: 40 per cent of the total number of bench and floor molders who have served a regular apprenticeship of four years at the trade of molding, may be employed at a differential of 10 per cent less than the basic wage rate, established for the foundry or foundries in the locality for which this agreement is made.

12th. During the life of this agreement there shall be no further attempt made by either party to introduce any conditions not herein provided for, unless by mutual consent. Furthermore it is understood that there are no other agreements or understandings between the parties to this agreement except such as are herein recorded.

13th. Expiration of agreements, between the N. F. A. and the I. M. U. of N. A. All agreements entered into locally or nationally between the members of the two associations shall be made to expire as of the same date—said date to be the first Saturday in June of each year.

On behalf of the National Founders' Ass'n.

On behalf of the Iron Molders' Union.

WAGE RATES AND HOURS IN FOUNDRIES.

The following table, showing by cities the minimum wage rates of molders and hours of labor in jobbing and machinery foundries in the United States and Canada, was published by the National Founders' Association in connection with recent agreements, the more important of which are reproduced in this Bulletin:

MINIMUM WAGE RATES OF MOLDERS AND HOURS OF LABOR IN JOBBING AND MACHINERY FOUNDRIES.

[Figures published by National Founders' Association.]

City.	Molders' minimum wages.			City.	Molders' minimum wages.		
	Floor.	Bench.	Hours of labor.		Floor.	Bench.	Hours of labor.
Akron, Ohio.....	\$2.90	\$2.90	10	Newark, N. J.....	\$2.90	\$2.65	9
Albany, N. Y.....	3.00	3.00	9	Newcastle, Pa.....	3.00	3.00	9
Alliance, Ohio.....	2.75	2.75	9	New Haven, Conn.....	2.75	2.75	10
Anaconda, Mont.....	4.00	4.00	9	New London, Conn.....	2.75	2.75	9
Ansonia, Conn.....	2.75	2.50	9	New Orleans, La.....	3.00	3.00	9
Auburn, N. Y.....	2.65	2.65	9	New York, N. Y.....	3.00	2.75	9
Baltimore, Md.....	2.75	2.75	9	Omaha, Nebr.....	3.05		9½
Battle Creek, Mich.....	2.75	2.75	10	Omaha, Nebr.....		2.88	9
Barberton, Ohio.....	2.90	2.90	10	Paterson, N. J.....	2.90	2.70	10
Bay City, Mich.....	2.75	2.75	9	Peoria, Ill.....	3.00	3.00	10
Beaumont, Tex.....	3.50	3.50	9	Peekskill, N. Y.....	3.00	2.75	10
Beloit, Wis.....	2.90	2.75	10	Philadelphia, Pa.....	2.90	2.90	9
Bessemer, Ala.....	3.00	3.00	9	Pittsburg, Pa.....	3.00	3.00	9
Birmingham, Conn.....	2.75	2.50	9	Plainfield, N. J.....	2.75	2.75	9
Birmingham, Ala.....	3.00	3.00	10	Portland, Oreg.....	3.50	3.50	9
Boston, Mass.....	2.75	2.75	9	Poughkeepsie, N. Y.....	3.00	2.75	9
Bridgeport, Conn.....	2.75	2.50	9	Providence, R. I.....	2.75	2.75	10
Brooklyn, N. Y.....	3.00	2.75	9	Quincy, Ill.....	2.75	2.75	9
Buffalo, N. Y.....	2.80	2.80	10	Racine, Wis.....	2.85	2.65	10
Butte, Mont.....	4.00	4.00	9	Richmond, Ind.....	2.65	2.65	10
Camden, N. J.....	2.75	2.75	10	Rochester, N. Y.....	2.75	2.75	9
Chester, Pa.....	3.00	3.00	10	San Antonio, Tex.....	3.00	3.00	9
Chicago, Ill.....	3.00	3.00	9	San Francisco, Cal.....	3.25	3.25	9
Cincinnati, Ohio.....	3.20	3.00	10	Saginaw, Mich.....	2.75	2.75	9
Cleveland, Ohio.....	3.00	3.00	10	Salem, Mass.....	2.75	2.75	9
Cold Spring, N. Y.....	3.00	2.75	10	Salem, Ohio.....	2.75	2.75	9
Colorado Springs, Colo.....	3.50	3.50	9	Scranton, Pa.....	2.75	2.75	10
Columbus, Ohio.....	2.85	2.85	10	Seattle, Wash.....	3.50	3.50	9
Dallas, Tex.....	3.00	3.00	9	Seneca Falls, N. Y.....	2.60	2.60	10
Dayton, Ohio.....	2.90	2.65	10	Sing Sing, N. Y.....	2.75	2.75	9
Denver, Colo.....	3.50	3.50	9	Springfield, Mass.....	2.75	2.75	9½
Derby, Conn.....	2.75	2.50	9	Springfield, Mo.....	3.00	3.00	9
Detroit, Mich.....	3.00	2.80	10	Springfield, Ill.....	2.90	2.90	10
Elizabeth, N. J.....	3.00	3.00	9	Springfield, Ohio.....	2.90	2.65	10
Erie, Pa.....	2.80	2.80	10	St. Joseph, Mo.....	2.85	2.85	9
Eureka, Cal.....	3.50	3.50	9	St. Louis, Mo.....	3.00	2.90	9
Fort Worth, Tex.....	3.25	3.25	9	St. Paul, Minn.....	2.88	2.88	9
Hallifax, N. S.....	2.25	2.25	9	Syracuse, N. Y.....	2.70	2.70	9
Hamilton, Ont.....	2.65	2.65	10	Tacoma, Wash.....	3.50	3.50	9
Hancock, Mich.....	3.10	3.10	9	Toledo, Ohio.....	2.75	2.75	10
Hartford, Conn.....	2.75	2.75	9	Toronto, Ont.....	2.75	2.75	9
Holyoke, Mass.....	2.75	2.75	10	Toronto, Ont.....	2.75	2.75	10
Houston, Tex.....	3.30	3.30	9	Trenton, N. J.....	2.75	2.75	9
Indianapolis, Ind.....	3.00	2.90	10	Troy, N. Y.....	3.00	3.00	9
Jackson, Mich.....	2.75	2.75	10	Utica, N. Y.....	2.75	2.75	9
Jersey City, N. J.....	3.00	2.75	9	Vancouver, B. C.....	3.50	3.50	9
Lynn, Mass.....	2.75	2.75	9	Victoria, B. C.....	3.50	3.50	9
Long Island City, N. Y.....	3.00	2.75	9	Washington, D. C.....	2.75	2.75	9
Memphis, Tenn.....	3.25	3.25	9	Waterbury, Conn.....	2.75	2.75	9
Los Angeles, Cal.....	3.37½	3.37½	9	West Superior, Wis.....	2.88	2.88	9
Mount Vernon, Ohio.....	2.85	2.85	10	Wilmington, Del.....	2.47½	2.47½	9
Milwaukee, Wis.....	3.00	2.90	10	Windsor Locks, Conn.....	2.75	2.75	9
Minneapolis, Minn.....	2.88	2.88	9	Warren, Ohio.....	2.90	2.90	9
Moline, Ill.....	2.75	2.75	10	Worcester, Mass.....	3.00	3.00	10
Montreal, Quebec.....	2.55	2.55	10	Youngstown, Ohio.....	3.00	3.00	9
Newburg, N. Y.....	3.00	2.75	10				

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

RHODE ISLAND

Sixteenth Annual Report of the Commissioner of Industrial Statistics, made to the General Assembly at its January session, 1903. Henry E. Tiepke, Commissioner. viii, 535 pp.

The following are the subjects presented in this report: Statistics of textile manufactures, 78 pages; official valuations of property, 33 pages; imports and exports of merchandise, 13 pages; strikes, lock-outs, and shut downs, 64 pages; banking institutions, 38 pages; free public employment offices, 23 pages; decisions of courts affecting labor, 235 pages; labor laws, 32 pages; textile school, 5 pages.

TEXTILE MANUFACTURES.—Comparative statistics are given for the years 1900 and 1901 for 188 identical establishments, of which 90 were engaged in the manufacture of cotton goods, 13 in the manufacture of hosiery and knit goods, 17 were bleacheries and dye and print works, 4 were in the manufacture of silk goods, and 64 in the manufacture of woolen goods. The table following summarizes the statistics:

STATISTICS OF 188 TEXTILE MANUFACTURING ESTABLISHMENTS, 1900 AND 1901.

Items.	1900.	1901.	Increase.	
			Amount.	Per cent.
Single proprietors	34	33	a 1	a 2.94
Firms	29	25	a 4	a 13.79
Corporations	125	130	5	4.00
Partners in firms	71	66	a 5	a 7.04
Stockholders in corporations	3,816	3,882	66	1.73
Aggregate wages paid	\$17,998,136	\$18,707,183	\$709,047	3.94
Average days in operation	292.45	289.88	a 2.57	a .88
Employees:				
Average number	47,600	48,604	1,004	2.11
Greatest number	51,504	53,317	1,813	3.52
Smallest number	41,426	44,428	3,002	7.25
Average yearly earnings	\$378.11	\$384.89	\$6.78	1.79

a Decrease.

For 1901 alone statistics are given for 200 establishments, of which 96 were engaged in the manufacture of cotton goods, 14 in the manufacture of hosiery and knit goods, 22 were bleacheries and dye and print works, 4 were in the manufacture of silk goods, and 64 in the manufacture of woolen goods. A summary of the statistics of the 200 establishments follows:

Single proprietors	34
Firms	27
Corporations	139
Partners in firms	74
Stockholders in corporations	3,965
Aggregate wages paid	\$19,679,723

Employees

Average number	51,346
Greatest number	56,205
Smallest number	46,982
Average yearly earnings	\$383.28

The following statement shows, for selected occupations, the average weekly wages paid during 1901 in the textile industries of the State:

AVERAGE WEEKLY WAGES IN SELECTED OCCUPATIONS IN TEXTILE INDUSTRIES, 1901.

Industry.	Black-smiths.	Machin-ists.	Loom-fixers.	Frame-spinners.	Mule-spinners.	Weavers.
Cotton goods	\$12.35	\$12.95	\$11.73	\$5.22	\$10.78	\$8.34
Hosiery and knit goods	18.00	15.50	15.00	6.00	8.62	13.00
Bleacheries and dye and print works	13.88	14.43	.....	.....	.....	.....
Silk goods .....	.....	13.50	11.75	.....	10.50	9.67
Woolen goods	14.20	14.38	14.49	6.06	9.88	12.30

STRIKES, LOCKOUTS, AND SHUT DOWNS.—This is a chronological record of the various labor troubles occurring within the State during 1902, derived chiefly from reports given in the newspapers. No statistics are presented which can be summarized.

FREE PUBLIC EMPLOYMENT OFFICES.—Under this title are presented statistics of these employment agencies as now maintained by the States of Illinois, Ohio, and Connecticut. There is a demand that similar offices be established in the industrial centers of Rhode Island.

DECISIONS OF COURTS AFFECTING LABOR.—In this part of the report are reproduced the decisions published in the Bulletin of the United States Bureau of Labor during the year 1902.

LABOR LAWS.—A reprint of the labor laws of the State constitutes this section of the report.

TEXTILE SCHOOL.—Under this caption is presented the report of a joint special committee appointed in 1902 to inquire into the establishment of a school for textile industries. Doubting the wisdom of incurring at present the expense of establishing a separate school, and thus perhaps duplicating educational apparatus, the committee recommends that an increased annual appropriation be made to the Rhode Island School of Design, upon its furnishing adequate opportunities for instruction, both to students and operatives, in textile designing and textile work.

VIRGINIA.

Fifth Annual Report of the Bureau of Labor and Industrial Statistics for the State of Virginia. 1902. James B. Doherty, Commissioner. 205 pp.

The subjects presented in this report may be grouped under the following heads: Manufacturing industries, 87 pages; railroad employees, 10 pages; waterworks and gas works, 12 pages; mine products, 7 pages; decisions of courts affecting labor, 32 pages; labor laws, 41 pages; trade unions, 13 pages.

MANUFACTURING INDUSTRIES.—Returns were secured from 14 indus-

tries of the State, giving, for each establishment reporting, capital invested, value of product, amount paid in wages, number of days worked, and number, daily wages, and hours of labor of each class of employees; also reports as to changes in wages. The table following summarizes the principal data.

STATISTICS OF MANUFACTURES, 1901.

Industries.	Estab-lish-ments.	Capital invested.	Value of product.	Wages paid.	Wage-earners.
Artificial ice.....	14	\$387,364	\$154,068	\$38,494	146
Boxes and baskets.....	16	544,992	1,690,152	348,639	1,476
Breweries.....	5	914,169	811,689	119,420	225
Cigars, cigarettes, and cheroots.....	39	621,324	5,631,400	652,699	1,801
Cotton mills.....	7	3,419,000	2,447,407	573,454	3,024
Fish oil and fish guano.....	8	333,469	587,620	133,251	606
Flour mills.....	48	1,106,899	3,465,223	96,907	325
Iron and machine works.....	31	4,850,627	16,128,727	4,716,942	9,122
Knitting mills.....	12	459,272	1,326,967	346,125	1,590
Paper and pulp.....	6	508,923	607,202	74,035	237
Printing and engraving.....	42	612,796	921,691	305,899	673
Shirts and underwear.....	6	44,600	118,100	32,250	147
Tobacco factories.....	30	2,479,202	6,069,069	744,806	3,481
Woolen mills.....	7	490,679	477,156	79,348	319

In a majority of the cigar and tobacco factories eight to ten hours constituted a day's work, in iron and machine works nine to ten hours, and in cotton and woolen mills ten to eleven hours. A large proportion of all establishments canvassed reported full time worked during the year and trade conditions good, while a considerable number reported an increase in wages.

RAILROAD EMPLOYEES.—Tables are given showing, by occupations, the number of persons employed by the railroads of the State during the year 1901, together with the number of days worked and the total yearly and the average daily wages paid each class of employees. Accidents to employees, by causes, are also presented for the year.

The table following shows, by occupations, the number employed and the average daily wages for the years 1899 and 1901, and the total amount paid in wages during 1901:

NUMBER AND WAGES OF RAILROAD EMPLOYEES.

Occupations.	Number of employees.		Average daily wages.		Total wages, 1901.
	1899.	1901.	1899.	1901.	
General office clerks.....	737	1,149	\$2.07	\$1.91	\$636,696.36
Station agents.....	881	1,065	1.31	1.46	535,918.18
Other station men.....	2,390	2,220	1.11	1.34	913,298.33
Enginemen.....	2,327	1,247	3.33	3.84	1,438,016.19
Firemen.....	947	1,438	1.50	1.74	648,834.89
Conductors.....	651	871	2.66	3.03	784,562.75
Other trainmen.....	1,699	2,113	1.37	1.50	899,491.76
Machinists.....	637	905	2.22	2.15	561,521.66
Carpenters.....	1,474	1,848	1.79	1.68	934,624.70
Other shopmen.....	3,183	3,421	1.55	1.58	1,562,916.73
Section foremen.....	665	953	1.42	1.41	466,123.31
Other trackmen.....	4,679	7,149	.94	.96	1,710,200.62
Switchmen, flagmen, and watchmen.....	996	1,141	1.10	1.31	462,965.22
Telegraph operators and dispatchers.....	890	1,021	1.72	1.60	543,315.44
Employees, floating equipment.....	317	356	1.38	1.46	173,304.67
Other employees and laborers.....	2,251	4,006	1.23	1.33	1,573,576.09
Total.....	24,634	31,206	1.56	1.62	13,875,356.92

*The sum of the items does not agree with this total; the figures, however, are reproduced as they appear in the original.

Accidents to employees from moving trains, locomotives, or cars resulted in 57 being killed and 538 being injured, and accidents from causes other than moving trains, etc., resulted in 2 being killed and 876 being injured.

MINE PRODUCTS.—During 1901 the State produced 2,725,873 short tons of coal of a total spot value of \$2,353,989. There was an average of 4,152 persons employed for 279 working days. During the same year 907,130 short tons of coke were produced at a total value at ovens of \$1,483,670. In 1900 the granite production of the State amounted to \$211,080, slate to \$190,211, gypsum to \$18,111, limestone to \$403,318, talc and soapstone to \$116,930, clay products (brick, tile, and pottery) to \$1,305,195, manganese ores to \$69,924, and iron ores (Virginia and West Virginia combined) to \$1,489,318.

COURT DECISIONS AND LABOR LAWS.—In this part of the report are reproduced from the Bulletins of the United States Bureau of Labor decisions of courts affecting labor, and laws of various States relating to labor enacted during 1901.

TRADE UNIONS.—Reports were received from 116 organizations, representing a membership of 10,062. During 1901 the amount paid out for assistance by 111 organizations aggregated \$18,803.19. Wages and hours of labor of members of unions, and opinions on questions relating to labor are also given. The following table gives the trades unionized, with the number of organizations and members reported for each:

LABOR ORGANIZATIONS, 1901.

Occupations.	Organiza- tions.	Members.	Occupations.	Organiza- tions.	Members.
Bakers and confectioners . . .	2	113	Painters and decorators . . .	4	208
Barbers . . .	1	14	Pattern makers . . .	1	17
Blacksmiths . . .	3	64	Plumbers and gas fitters . . .	2	102
Boilermakers . . .	5	177	Pressmen . . .	1	34
Boilermakers' helpers . . .	1	54	Railroad clerks . . .	1	47
Bookbinders . . .	1	24	Railroad conductors . . .	5	273
Brewery workmen . . .	3	162	Railroad trainmen . . .	2	154
Bricklayers . . .	6	284	Retail clerks . . .	3	124
Carpenters and joiners . . .	10	736	Seamen . . .	1	2,400
Cigar makers . . .	4	152	Sheet-metal workers . . .	4	152
Electrical workers . . .	3	227	Slate and tile roofers . . .	1	9
Garment workers . . .	2	162	Stove mounters . . .	1	16
Glass bottle blowers . . .	2	62	Street-railway employees . . .	2	576
Granite cutters . . .	2	76	Tailors . . .	5	141
Locomotive engineers . . .	9	442	Telegraphers . . .	1	180
Locomotive firemen . . .	8	356	Tobacco workers . . .	4	1,226
Machinists . . .	6	672	Typographers . . .	5	329
Molders . . .	3	209			
Musicians . . .	2	93			
			Total . . .	116	10,062

apprenticeship by competent persons, the examination of apprentices and the granting of a certificate or diploma, the requirement of a written contract, etc. In all these points the commission recognizes the inferiority of the French law, considering it especially defective in permitting verbal contracts, for in practice only those apprentices who have written contracts (about one-tenth of the total number) are really protected by the law. In fact, more than one-half of each class of institutions and more than four-fifths of all institutions reporting declare that as a means of improving apprenticeship the law should require contracts to be written.

Other measures for the improvement of apprenticeship were proposed in the schedules. The opinion was general that in future apprentices should be prepared in the trade schools or their practical training should be supplemented by attendance on the complementary trade courses. Three-fourths of the institutions answering the questions as to trade schools, etc., advocated obligatory attendance on the complementary courses, the time required to be deducted from the legal workday. Employers' associations, however, were divided on this question, and chambers of commerce were as a rule opposed to making such attendance obligatory. To enhance the value of the certificate to which the apprentice is entitled at the expiration of his contract it was suggested that he be required to pass an examination before the council of prud'hommes or a mixed commission, the examining body to deliver a certificate in case of success. Nearly one-half of the institutions reporting were in favor of fixing by law the maximum period of apprenticeship and four-fifths of them were opposed to limiting the number of apprentices. A certain number of workingmen's unions, productive societies, councils of prud'hommes, and employers' associations declared that some sort of supervision of apprenticeship is necessary.

It is stated that there is a decline in the trade instruction of French workmen, a fact long recognized in some quarters, and efforts have been made to offset its effects by the establishment of trade schools, trade courses, etc. A large number of these schools and courses are now maintained by individuals, employers' associations, trade unions, and other organizations, in addition to those maintained by the State and local governments.

The recommendations of the commission are not very radical in view of the facts brought out by the investigation. Taking the present law as a basis, it is proposed to modify certain of its articles in accordance with the following general propositions:

1. While the law should, as at present, grant full liberty to enter into a contract of apprenticeship or not as the parties see fit, the contract when made should be written.

2. The supervision of apprenticeship should be provided for by law. Such supervision should be confided to local commissions composed equally of employers and workingmen, or, in the event of their failing to act, to the councils of prud'hommes.

3. An examination in the theory and practice of the trades should be instituted and a certificate of trade instruction given to successful candidates, the examination to be before the council of prud'hommes or some other competent body, and the certificate to be given by the council of prud'hommes.

4. In case of grave abuses the council of prud'hommes, acting on the motion of the local trade commission mentioned in proposition 2, if there be one, and by virtue of their office when there is no such commission, may, after trial, reduce and limit the number of apprentices in an establishment; and in case of a second offense or after very grave faults the council may temporarily or permanently withdraw the right of an offender to employ apprentices. This proposition is based partly upon the assumption that an unscrupulous person might employ a number of apprentices wholly unwarranted by the size of his establishment, with results detrimental to the trade and to the apprentices themselves. There is no idea of limiting the ratio between apprentices and workmen in an establishment or trade.

5. In whatever concerns apprenticeship and the limitation of the number of apprentices in a given trade the law should permit mixed commissions, representing employers' and workingmen's organizations that may have come to an agreement concerning those matters, to appear before the council of prud'hommes and prove an injury caused to all or a portion of their members by unfair competition arising from the abuse of the terms of such agreement by any person, whether he is a party to the agreement or not.

It is stated that the idea expressed in this last proposition could be best carried out by amending the law of March 21, 1884, concerning trade organizations, rather than the law of February 22, 1851. By giving a legal standing to the mixed commissions representing employers' and workingmen's organizations in a given trade, it is hoped the troublesome question of limiting the number of apprentices will be amicably adjusted by employers and workmen in each trade or industry.

These proposed changes in the law would apply only to those who are employed under a written contract of apprenticeship. The commission estimates that nine-tenths of those persons under 18 years of age who are employed in industry or commerce, or about 540,000 in all, would not be protected by the amended law. To insure the proper trade training of these unprotected young persons, it is proposed further to amend the law so as to guarantee them a minimum of trade instruction of a character to correspond with the work upon

which they shall be employed. The instruction may be given in the workshop, but if it can not be given there or if the employer does not wish to assume the responsibility for it, it shall be given in the trade schools and trade courses. The degree of instruction received should be shown by examination and certification. The possession of a certificate of trade instruction by a person under 18 years of age would relieve him and the employer from compliance with the apprenticeship law.

ONTARIO.

Third Report of the Bureau of Labor of the Province of Ontario, for the year ending December 31, 1902. R. Glockling, Secretary. 191 pp.

The present report contains an address on the value and influence of labor statistics, by Carroll D. Wright; a list of the labor bureaus of various States and countries; replies to inquiries of the bureau as to new industries established or desired in various localities; a report on labor organizations, including one on strikes and lockouts; extracts from official publications, showing strikes in Canada, Great Britain, and the United States, and changes of wages in Great Britain; statistics of manufactures; a consideration of free public employment offices; decisions of courts affecting labor, and a chronology and synopsis of the labor laws of Ontario.

LABOR ORGANIZATIONS.—Schedules were sent to 600 addresses, to which 297 replies were received, representing 84 trades or other bases of union. The number and nature of the organizations reporting were 257 trades and labor unions, 10 trades and labor councils, 6 Knights of Labor assemblies, and 3 federations of trades. Detailed reports of organizations are presented, together with a table furnishing a directory of officers and other information relating to each union. Average wages per week and hours of labor of members, with comparisons with wages and hours of labor of unorganized workmen, are also given, but no summaries are presented.

For the period from September 1, 1901, to December 31, 1902, 75 strikes and 4 lockouts were reported, involving about 500 establishments and 6,863 persons, and covering an aggregate of 1,227 days. This does not include 1 strike still pending on December 31, 1902.

MANUFACTURES.—Under this head are presented the returns from 236 establishments, showing for each the number of employees, days in operation, total wages paid, value of product, average yearly earnings and daily wages, and per cent of value of product devoted to wages, and to material, other expenses, and profits. Of these 236 establishments, 222 represent 23 industries, the remaining 14 establishments being grouped as miscellaneous. The returns are for the year ending December 31, 1901. The table following presents the *principal totals for each of the industry classes.*

STATISTICS OF MANUFACTURES, 1901.

Industries.	Estab- lish- ments.	Em- ploy- ees.	Total wages.	Aver- age annual earn- ings.	Value of product.
Agricultural implements.....	5	304	\$109,000	\$358.55	\$388,500
Brewing and malting.....	3	75	44,300	590.67	242,190
Canned goods.....	4	488	84,000	172.13	375,000
Cigars.....	3	65	26,690	410.62	79,000
Clothing.....	8	348	111,100	319.26	351,500
Confectionery, etc.....	6	472	168,670	357.55	1,305,000
Carriages and wagons.....	7	414	148,531	358.77	527,297
Brick, cement, etc.....	10	234	82,404	352.15	193,487
Dairy products.....	2	11	1,300	118.18	72,605
Flouring mills.....	17	305	83,934	275.19	1,668,565
Furniture.....	9	836	294,956	352.52	752,174
Gas, electric light, etc.....	24	1,062	541,458	509.85	1,700,721
Lumber.....	13	777	282,092	363.05	680,000
Machinery and iron foundries.....	27	1,232	452,584	367.36	1,708,980
Medicines, etc.....	2	28	8,020	286.43	30,000
Planing mills.....	11	278	74,568	268.23	449,835
Printing and publishing.....	26	550	216,983	394.51	545,104
Pianos and organs.....	4	706	294,220	416.74	842,000
Pulp making.....	2	156	57,300	367.51	894,382
Fork packing.....	2	78	30,606	392.38	1,008,781
Sash, doors, and blinds.....	5	127	42,593	335.38	139,000
Wood specialties.....	10	643	199,115	309.67	523,393
Woolens and cottons.....	22	1,510	314,153	208.05	1,818,553
Miscellaneous.....	14	785	296,844	378.15	2,031,133
Total.....	236	11,484	3,965,421	\$45.30	17,825,220

To the 11,484 persons employed in the 236 manufacturing establishments an aggregate of \$3,965,421 was paid in wages. The average annual earnings per person was \$345.30 and the average daily wage \$1.18. Of the total value of product, 22.24 per cent went to labor, while the remaining 77.76 per cent was distributed among cost of material, interest, taxes, rent, insurance, miscellaneous expenses, and profit.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

EMPLOYERS' LIABILITY—CONSTRUCTION OF STATUTE—VICE PRINCIPAL—SAFE PLACE TO WORK—*Southern Indiana Railway Company v. Harrell, Supreme Court of Indiana, 68 Northeastern Reporter, page 262.*—In this case Jackson H. Harrell sued the above-named railway company for injuries received while in its employment. Harrell was employed with others in the building of a pier for a railroad bridge, and to aid in its construction a derrick had been erected upon a platform a few feet north of a temporary track used to aid in the work. This derrick was so constructed that heavy stones supported by it tended to swing toward the track, this construction being intentional to facilitate its use. Harrell was working with a group of men of whom one Gratzner was foreman, and at the time of the accident which caused the injury was seated on a projecting bent. Just as a train which had been standing at the place of the men's employment was moving away, Gratzner signalled the engineer controlling the derrick to raise a stone which was lying on the pier, and in the meantime three men, Courtney, Clemmons, and Pollard, were holding the stone away from the track by means of a rope so that it should not swing against the cars. After a time Clemmons and Pollard let go of the rope to go about other duties, and Courtney, finding the stone too heavy for him to hold alone, also let go, so that the suspended stone caught on a running board of one of the passing cars and was made to swing against Harrell, injuring his feet. Gratzner had exclusive charge of the stone work, directing the men and working himself. The action was brought under the second subdivision of section 7083 Burns's Rev. St., 1901, which declares that a railroad company is liable for injury to a servant resulting from the negligence of any person in the service of such corporation to whose order the injured employee was bound to conform and did conform. The circuit court of Greene County awarded damages to Harrell, which judgment was on appeal affirmed in the appellate court. Further appeal was taken to the supreme court, and the judgement of the other courts was reversed.

After stating the facts, Judge Gillett, who delivered the opinion of the court, continued as follows:

This brings us to the question as to whether appellant was responsible for the negligence of Gratzner, assuming that he, as well as Clemmons and Polland, was guilty of negligence. At to the Employers' Liability Act (section 7083 et seq., Burns' Rev. St. 1901), it is evident that appellant is not liable under the second subdivision of the first section. That subdivision was not intended to create a liability based on an order or direction, where such order or direction was as broad as the whole service, and where the injured servant, without the compulsion of an order or direction from one whose order or direction he was required to obey, was at the time governing himself according to his own judgment as to what was proper. In so far as the fourth subdivision of said section is concerned, it does not appear that Gratzner belonged to any of the classes of servants particularly mentioned therein. The latter part of said subdivision is not any broader than the common law upon the subject; so we may as well consider the remaining question as to liability from that standpoint.

Assuming that Gratzner was negligent, as we have before done, it would follow that appellant might have been liable to a stranger, under the rule of respondeat superior, had he been in appellee's place. But in appellee's case negligence could not be predicated on his injury if it was a result of one of the risks of the service, because as to those risks which the servant assumes there is no duty.

One of the leading duties of a master, except in instances when it can be said that the complaining servant has assumed the particular risk, is to use ordinary care to keep the place where such servant is employed in as safe a condition as the nature of the employment fairly admits of. To make the above statement certain requires a consideration of the meaning of the word "place." If by this it is meant that the master, by himself or representative, must be always present to ward off every transient peril that may menace the servant in the particular spot or place that he may chance to occupy while engaged in the performance of his work, then it must be affirmed that the rule of law devolves upon the master a duty that in many instances it would be wholly impracticable to discharge. A railroad company could scarcely employ vice principals enough to make it sufficiently argus-eyed to guard its servants to that extent. Furthermore, it is to be observed that in some lines of business, like the operation of a railroad, many servants are employed whose respective duties are so correlated that in the very forwarding of the master's business they are protecting the lives and limbs of their coservants; and if some limitation be not put upon the word "place," as respects transient dangers in the conducting of the details of the business, then every one of such servants becomes, for some purposes, a vice principal, and the integrity of the coservant rule is destroyed.

As was said in the decision of *Butler v. Townsend*, 126 N. Y. 105, 26 N. E. 1017: "A place, in its broad sense, is never safe in which an accident happens, and an accident always happens in some place, and so the master might almost become an insurer."

In line with the above observations are the following expressions from the decision of *Hermann v. Port Blakely Mill Co.* (D. C.) 71 Fed. 853: "The word 'place,' in my judgment, means the premises where

the work is being done, and does not comprehend the negligent acts of fellow-servants, by reason of which the place is rendered unsafe or dangerous. The fact that the negligent act of a fellow-servant renders a place of work unsafe is no sure and safe test of the master's duty and liability in this respect, for it may well be said that any negligence which results in damage to some one makes a particular spot or place dangerous or unsafe. To so hold would virtually be making the master responsible for any negligence of a fellow-servant which renders a place of work unsafe or dangerous. It would be doing the very thing which it is the policy and object of the general rule not to do. It would create a liability which the master could not avoid by the exercise of any degree of foresight or care."

Granting that for some purposes the man Gratzner was a vice principal, we are unable to perceive that he was acting in that capacity at the time that he gave the alleged negligent order. The risk of injury from the negligence of a foreman is as much within the servant's assumption as is the risk that he may be injured by the act of any other coservant. [Cases cited.] The evidence in this case shows that Gratzner took part in the physical work of setting stone in the construction of the pier, and he was working as a servant when he gave the order looking to the setting of the stone which injured appellee.

To sum up the question as to the claim of a common-law liability: The appellant was not bound to have a representative present at every moment to keep the place that appellee might chance to occupy safe, as against the possible negligence of a coemployee. The man Gratzner was engaged at the time of his alleged negligence as a servant in forwarding the work. Appellee and Gratzner were coservants, and, as it is not alleged or proved that appellant did not exercise due care in the selection and retention of such foreman, it follows that appellant is not liable for his negligence in the particular instance.

The judgment of the Greene circuit court and of the appellate court are reversed, and the former court is directed to award appellant a new trial.

EMPLOYERS' LIABILITY—EMPLOYMENT OF CHILDREN—EFFECT OF STATUTE—*Perry v. Tozer*, *Supreme Court of Minnesota*, 97 *Northwestern Reporter*, page 137.—In this case James Elmer Perry, a minor, sued by his next friend to recover damages for injuries received while in the service of David Tozer. Perry was 14 years of age and was employed in Tozer's sawmill tending a "slab conveyor" and while so occupied was injured by his foot slipping into the gearing, by which it was drawn into the machinery and so injured as to require amputation of his right leg below the knee. The grounds on which recovery was sought were, first, the unlawful employment of Perry by reason of his immature years; second, the neglect of Tozer to properly guard the sprocket wheel and chain where Perry's foot was caught; and, third, the failure of the employer to give proper warnings and instructions of the risk incurred. Judgment of damages was awarded in the district court of Washington County, from which an appeal was taken on the grounds that the evidence was insufficient

and also that the judge of the lower court had given undue weight to certain legislation relating to the employment of children. The appeal resulted in the judgment of the lower court being affirmed. As to the point of the evidence in the case, Judge Lovely, who announced the opinion of the supreme court, said:

From an examination of the entire evidence we are satisfied that it reasonably tends to show that the guards in front of the gearing where plaintiff's foot was caught, which to outward appearances protected him, would permit the slipping of the operator's foot into the revolving machinery behind the wooden box covering it; and whether the defendant was negligent in this respect was for the jury. Neither is it conclusive that the plaintiff was required to have made a more thorough examination of the gearing and guard near which he was required to place his feet while performing his duties, nor that he assumed the risks and hazards occasioned thereby; hence that part of the blended motion asking for judgment was properly denied. We can not say, either, that plaintiff should have exercised greater caution, or failed in ordinary care, in preventing his feet from being caught. The evidence tended to show that he had received no warning of danger, and upon all these questions the verdict must be held conclusive, and allowed to stand, unless there was error in respect to a material instruction upon the burden of proof, and the damages are so large, in view of plaintiff's injuries, as to indicate that it was the result of passion and prejudice.

On the question of the statutes, the court first cited at some length the provisions relating to the employment of children under the age of 14 years and employment of children during school age and in particular the seventh section of chapter 171, laws of 1895, which forbids the employment of an infant between the ages of 14 and 16 years unless the employer has procured a certificate from the school superintendent or school principal permitting such employment. In discussing the effect of this statute the court spoke in part as follows:

Counsel for defendant insists that the statutes from which we have quoted at length, so far as the same related to children of the age of plaintiff, were intended to secure for their benefit educational benefits only; therefore could not be regarded as a proximate cause of an accident occurring through the neglect of the master to furnish reasonably safe instrumentalities for their work upon dangerous instrumentalities, or in properly protecting the same, or the failure to give necessary instructions to an injured lad of the specific risks he incurred. We can not adopt the view that the sole object of these statutes was to secure educational advantages to children. Neither the history of the subject nor the terms of the enactments themselves will justify such a conclusion.

Authorities of the highest respectability hold that the violation of a statute prohibiting the employment of a child in a hazardous occupation, where such employment is prohibited by law, establishes a right to recover for negligence; hence in such cases liability is to be presumed from the employment in disobedience of law. [Cases cited.]

From the investigation we have made of the reasons for the stat

upon which the instruction of the trial court was based, we have reached the conclusion that the certificate which the school authorities are to give upon their examination of an infant was intended to secure educational advantages to the subjects of legal solicitude, and likewise to vest in the school officials the power to determine, in the exercise of wise judgment, whether, from the intelligence and capacity of such infant, it would be reasonably safe for him to engage in dangerous occupations. The failure to obtain this certificate was a violation of the statute, and entitled the plaintiff to a remedy for the negligent acts of defendant. Hence it was proper to give effect to the conceded disregard of the law, and, where an injury is within the mischief of the statute, it is not easy to see how less weight could be given to the statute than was expressed by the instruction of the trial court, which makes the violation of the law, with consequent injury from the dangerous machinery in use in defendant's mill, *prima facie*, but not conclusive [evidence], of plaintiff's right to recover.

LABOR ORGANIZATIONS—RIGHT TO LABOR—INTIMIDATION—CONSTITUTIONAL LAW—*Erdman et al. v. Mitchell et al.*, *Supreme Court of Pennsylvania*, 56 *Atlantic Reporter*, page 327.—This case came before the supreme court of Pennsylvania on appeal from the court of common pleas of Philadelphia County, the action being brought by William C. Erdman and others, members of the Plumbers' League of the city of Philadelphia, against Robert T. Mitchell and others, officers and members of the Allied Building Trades of Philadelphia. It appeared that Erdman and his associates were employed as journeymen plumbers in the erection of a large building on which were employed also a number of nonunion workmen and a larger number of workmen of various trades who were affiliated with the Allied Building Trades above mentioned. After the work had progressed for some time, a strike was ordered by the executive board of the Allied Trades, and all workmen affiliated therewith were ordered to desist from further labor on the ground of the employment on the building of nonunion men and the members of the Plumbers' League, which was not affiliated with the Allied Trades. After this strike had gone into effect, the defendants, Mitchell and others, as representatives of the Allied Trades, called on the manager of the firm, who had a general contract for the building, and said that if he would remove the objectionable workmen from the building the strike would cease.

An agreement was finally reached, which was reduced to writing, to the effect that plumbers should be employed who had the card of the Allied Trades, and that all other workmen of other trades now or hereafter employed on the building should have in their possession current cards from unions in affiliation with the defendants' organization. In accordance with this agreement, Erdman and his associates were dismissed from further employment on this building and work was

resumed. The nonunion workmen who had been employed were allowed to continue their service and were not molested. The plaintiffs, Erdman and others, then undertook to find employment elsewhere, but were not able to secure and retain employment in the city on account of the action of the officers of the Allied Trades, who announced to the president of the Plumbers' League, of which Erdman was a member, that it was the purpose of the Allied Trades to prevent the employment of any plumber in Philadelphia who was not a member of a union affiliated with them and that they would use the same means that they had used in the case above described wherever they had the opportunity of doing so.

On these facts the court of common pleas had issued an injunction prohibiting the defendants, Mitchell and others and each and every one of them, their committees, agents, and servants from interfering with and from combining, conspiring, or attempting to interfere with the employment of the plaintiffs or any one or more of them, either by threatening loss to any employer who might take them into his service or by any scheme, combination, or conspiracy among themselves or with others to annoy, hinder, or interfere with or prevent any person or persons or corporation from employing or continuing to employ such plaintiffs or any one or more of them by putting them in fear of loss or trouble, or to do anything to hinder, impede, or obstruct the plaintiffs or any one or more of them from securing employment or continuing in employment. From this injunction the officers of the Allied Trades took an appeal to the supreme court, with the result that the decree of the court below was affirmed and costs assessed upon the appellees.

Judge Dean, for the supreme court, spoke in part as follows:

We have before us the somewhat unusual case of two warring trades unions invoking the law for the settlement of their respective rights, and the determination of their legal conduct in carrying out the purpose of their respective organizations.

The court below was of opinion that in so far as defendants, in furtherance of the purposes of the Council of the Allied Building Trades, undertook, by intimidation of plaintiffs and their employers, to coerce the plaintiffs into joining their organization, or any particular organization, and by such action caused the workmen to suffer damage, such action was unlawful, and ought to be restrained by equity. This conclusion is correct. This is not an indictment for a statutory offense, nor for a common-law conspiracy, which last the legislature, by acts of 1872 (P. L. 1175), 1876 (P. L. 45), and 1891 (P. L. 300), has practically abolished. It is a suit in equity to restrain an unlawful act. It is argued by appellees' counsel that an act may be clearly unlawful, although not the subject of criminal prosecution; that an agreement by a number of persons that they will, by threats of a strike, deprive a mechanic of the right to work for others merely because he does not choose to join a particular union, is a conspiracy to commit an unlawful act, which conspiracy may be restrained.

We do not question that defendants may, under their constitution and rules, resolve that they will not work with members of other organizations or with nonunion men, and act accordingly. That is their right, and their organization, when the conduct of its members is limited to refraining from work themselves according to such resolution, is not unlawful. But it is manifest, from the findings of fact and the testimony, that defendants went far beyond this. The contractors undertook the erection of a large and expensive building. They employed a large number of men skilled in all branches of the building trades, a majority of whom were members of defendants' union. No notice was given by the organization to the contractors that their members would not be permitted to work on the same building with members of plaintiffs' union or with nonunion men. After the building had progressed until it had reached what may be called its critical stage, a strike was ordered of all the workmen affiliated with defendants' union, and two-thirds of all at work quit. After the strike, negotiations for calling it off were opened between the manager for the contractors and defendants, and the result was the agreement with their union heretofore noticed. Then followed the discharge of plaintiffs from work on that building, and then an interview between the president of plaintiffs' union and the secretary of defendants'. The latter told the president that the Allied Trades intended to pursue the same course as at the Mariner and Merchant building on every building in the city, for the purpose of driving every plumber into a union affiliated with the Allied Trades. This evidence would have established a criminal conspiracy at common law. Concede that it would not, under our present legislation, now establish it; nevertheless it is still an unlawful act. There was no complaint as to wages by any of the workmen on the building when the strike was declared. All wanted to work, and their employers wanted them to work. But these defendants who did not work on the building had a grievance. Plaintiffs refused to, and would not, join the defendants' union. They must be driven to joining it by threats of loss of work, and their employers must be compelled to aid defendants by threats of loss of money on their contract. This is so plain that it is waste of time to more than state the facts to convince that the conduct of defendants was calculated to intimidate both employees and employers, and consequently was unlawful. The frightened employers, to avoid further loss, yielded. The plaintiffs did not yield, and, to prevent further intimidation of those who would otherwise employ them, they seek by this suit to restrain defendants from future acts of intimidation.

The first article of the Constitution says: "That the general great and essential principles of liberty and free government may be recognized and unalterably established, we declare, that all men are born equally free and independent and have certain inherent and indefeasible rights, among which are those of enjoying and defending life and liberty, of acquiring, possessing and protecting property and reputation and of pursuing their own happiness." Then follows the conclusion of this section: "Everything in this article is excepted out of the general powers of government and shall forever remain inviolate." This clause, unlike many others in the Constitution, needs no affirmative legislation, civil or criminal, for its enforcement in the civil courts. (Wherever a court of common pleas can be reached by the citizen, these great and essential principles of free government must be recog-

nized and vindicated by that court, and the indefeasible right of liberty and the right to acquire property must be protected under the common-law judicial power of the court. Nor does it need statutory authority to frame its decrees, or statutory process to enforce them against the violators of constitutional rights.

The right to the free use of his hands is the workman's property, as much as the rich man's right to the undisturbed income from his factory, houses, and lands. By his work he earns present subsistence for himself and family. His savings may result in accumulations which will make him as rich in houses and lands as his employer. This right of acquiring property is an inherent, indefeasible right of the workman. To exercise it, he must have the unrestricted privilege of working for such employer as he chooses, at such wages as he chooses to accept. This is one of the rights guaranteed him by our declaration of rights. It is a right of which the legislature can not deprive him, one which the law of no trades union can take from him, and one which it is the bounden duty of the courts to protect. The one most concerned in jealously maintaining this freedom is the workman himself.

A conspiracy is the combination of two or more persons by some concerted action to accomplish an unlawful purpose. It is unlawful to deprive a mechanic or workman of work by force, threats, or intimidation of any kind. A combination of two or more to do the same thing by the same means is a conspiracy. (That, by the legislation referred to, such conspiracy is no longer criminal, does not render it lawful.) At common law the courts held that such combination was so prejudicial to the public interests and so opposed to public policy, as rendered it punishable criminally; but the legislature, which generally determines what is and what is not public policy, has declared that it is no longer a crime or misdemeanor. But this is as far as it has gone. It is as far as it could go without abolishing the declaration of rights. To do that, the whole people of the commonwealth must be directly consulted, and they must give assent. For, while the plain implication from the declaration is that the power to limit this indefeasible right rests solely with the people, yet, when they adopted the constitution of 1874, with an extreme of caution they expressly said, "Everything in this article is excepted out of the general powers of government and shall forever remain inviolate." That is, shall forever remain with the people. They will not trust their own legislature with power to minimize or fritter it away—much less, a trades union. If the legislature to-day abolished indictment for willful and malicious trespass, or abolished the writ of estrepement, to-morrow courts of equity would still be bound, under the declaration of rights, to protect the citizen in the peaceable possession and enjoyment of his land, even if to do so they were compelled to imprison the lawless trespasser who refused to obey their writs. So the same courts are still bound to protect the humblest mechanic or laborer in his right to acquire property.

It is argued that defendants, either individually or by organization, have the right now to peaceably persuade plaintiffs and others not to work, and their employer not to hire them. So they have. It is further argued that they can quit work when they choose. So they can. But neither of these suggested cases is the one before us. Here a strike on a large building was declared because plaintiffs would not join a par-

ticular society. (The declared purpose of the strike was to cause loss of employment to plaintiffs because they would not join the Allied Building Trades—chose to remain faithful to their own union, the Plumbers' League. The Allied Trades would not declare the strike off, and permit work on the buildings to proceed until the employers entered into contract; practically stipulating that they would discharge plaintiffs, and not reemploy them. It is not important that apt language precisely expressing the threat should have been used. The meaning of their declarations and acts was well understood by all parties. The men lost their work. The employers, after a damaging stoppage, were permitted to proceed because they yielded to the threat; that is, they were intimidated because they feared further loss. How absurd it is to call this peaceable persuasion, and how absurd to argue that, if the law attempts to prevent it, the right of the workmen to organize for their common benefit is frustrated!) And then, what about the right of the Plumbers' League to organize for the common benefit of its members, of whom the plaintiffs are a part? The declared purpose of the Allied Trades is by these acts to absorb this union, and thereby destroy it. Under no possible view of the conduct of defendants was it lawful.

And so, as already intimated, it comes simply to the question, shall the law of an irresponsible trades union, or shall the organic law of a free commonwealth, prevail? We answer, every court of the commonwealth is bound to maintain the latter in letter and spirit.

MUNICIPAL CORPORATIONS—EMPLOYMENT OF ALIENS ON PUBLIC WORKS. CONSTITUTIONALITY OF STATUTE—*City of Chicago v. Hulbert et al.*, *Supreme Court of Illinois*, 68 *Northeastern Reporter*, page 786.—This was a case in which Hulbert and others had contested the validity of an ordinance providing for the improvement of a street in the city of Chicago. The matter was before the court of Cook County and also before the supreme court of Illinois on various hearings and appeals, in the course of which one point of more general interest was developed. The statute of June 1, 1889, relating to the employment of aliens on public works had not been observed by the contractor in carrying out the work of improving the street, and on this ground payment was contested in the course of the second appeal to the supreme court. On this point we quote from the remarks of Judge Ricks the following statement, in which that law was held to be unconstitutional.

It is now insisted by appellees that the proceedings are void, and that this ordinance can not be sustained, because paragraph 10 of chapter 6 of our statutes, entitled "Aliens," was not complied with (Hurd's Rev. Stat., 1901, p. 141). That paragraph provides that "it shall be unlawful for any * * * officer * * * acting for * * * any city, * * * or any contractor, or subcontractor, under any or either of said municipalities, to employ any person or persons, other than native born or naturalized citizens, or those who have in good faith declared their intentions to become citizens of the

United States, when such employees are to be paid, in whole or in part, directly or indirectly, out of any funds raised by taxation." Paragraph 11 of the same statute requires anyone employing labor to be paid out of the public funds to make a list of the persons so employed, showing that they meet the requirements of the foregoing paragraph, and paragraph 12 fixes a penalty for a violation of paragraph 11. Appellees took evidence showing that this statute was not complied with, and insist that, as these public funds go to the contractor who violated that law, the ordinance can not be sustained. A similar law was enacted by ordinance in the city of Chicago, and we have repeatedly held that such law is invalid, as it is in contravention of the constitution and the right of individuals to contract. The statute in question is void upon the same grounds, and neither the city nor the contractor was under any obligation to observe it.

RAILROAD COMPANIES—LIABILITY FOR INJURY OF EMPLOYEES OF ANOTHER ROAD—JOINT USE OF TRACKS—*Keck v. Philadelphia and Reading Railway Company, Supreme Court of Pennsylvania, 56 Atlantic Reporter, page 47.*—This was an action by Eliza A. Keck against the Philadelphia and Reading Railroad Company to recover damages for the death of her husband, who was an employee of the Central Railroad Company of New Jersey in the capacity of a locomotive engineer. By permission of the Philadelphia and Reading Railroad Company, the Central Railroad drew its trains over the tracks of the Reading Company at the point where the accident occurred, using its own engine and crew. There were parallel tracks at the place referred to, on one of which a train of the Reading Company was standing still and another in motion, the two trains being headed in the same direction. The train on which Keck was engineer was on the adjacent track, and just as he reached the rear of the stationary train of the Reading Company the moving train ran into the stationary one, throwing the caboose upon the engine of the Central train and killing Keck. The question turned upon the liability of the Reading Company for injury occurring under such circumstances, a statute of April 4, 1868 (Brightly's Purdon's Digest, p. 1604), which provides that any person who sustains injury while lawfully engaged or employed on or about the roads, works, or premises of a railroad company of which company he is not an employee shall have only the right of action that an employee would have had, being relied upon to relieve the railroad company from liability. The court of common pleas of Philadelphia County had awarded damages to Mrs. Keck, which judgment was on appeal affirmed. Judge Mitchell, speaking for the court, used in part the following language:

When the same tracks are used by two railroad companies, how far does the operation of the act of April 4, 1868 (P. L. 58), in relief of each from liability to the employees of the other, depend on the ownership or title to the tracks? Independently of the statute, each com-

pany was liable to the employees of the other for negligence, just as to any other strangers; the general similarity and aim of the duties not being sufficient to bring them within the rule as to risks of a common employment. (*Catawissa R. Co. v. Armstrong*, 49 Pa. 186.) The general effect of the act was, as has been said, to make three classes of persons—employees, quasi employees under the act, and strangers. It was held in *Spisak v. B. & O. R. Co.*, 152 Pa. 281, 25 Atl., 497, that the cases under the act fall into two classes—first, where the place of the accident “is clearly and for general purposes the ‘roads, works, depots or premises’ of the railroad company. In such cases it is sufficient if the person injured is lawfully ‘engaged or employed on or about’ them, and is not a passenger. * * * The other class is where the accident occurs in a place which is not exclusively and for general purposes, but only within a limited and statutory sense, the premises of the railroad company. In this class the nature of the employment at which the party injured was engaged at the time becomes material. If it is business connected with the railroad, in the sense that it is ordinarily the duty of railroad employees, then, while the party is engaged at it, the statute treats him as a quasi employee, and puts his rights on the same basis. If, however, the work has no relation to railroad work, as such, and is connected with the railroad only by irrelevant and immaterial circumstances of locality, the case is not within the statute at all.” This distinction has been constantly adhered to since, and, under it, when an accident occurs upon a track used by different roads, the question at once arises, whose track is it to be considered, for the purposes of the act of 1868?

The cases establish that the nature and extent of the ownership of the tracks is not a controlling factor. [Cases cited.]

The rules to be deduced from the cases, as substantially determined in *Kelly v. Traction Co.*, are: First. Where the same track is used by two railroad companies it must be considered, for the application of the act of 1868, as the property of each while using it. Secondly. Whether the use be by virtue of joint or several ownership, charter right, lease, license, or traffic agreement, is immaterial. Thirdly. To bring the case within the second class, distinguished in *Spisak v. B. & O. R. Co.*, 152 Pa. 281, 25 Atl., 497, namely, those where the employment is ordinarily the duty of railroad employees, the plaintiff must not only be engaged in such work, but also be so engaged for or upon the property of the railroad by whose negligence he is injured. Thus in the present case the plaintiff's husband was engaged in railroad work as a locomotive engineer, but not for the defendant, nor upon premises which were to be treated as defendant's at that time. He was therefore not within the act. Fourthly. In such cases the employees of each road accept the risks of their employment in regard to their own road, but not those incident to the operation of the other road, unless at the time engaged in some work for the other, or for both roads jointly.

The distinctions thus made were not directly developed by the facts in the earlier cases, but, as already shown, the language of the opinions indicates the trend of thought on the subject, and no case has been decided which upon its facts is out of harmony with the rules now laid down.

Judgment affirmed.

DECISIONS UNDER COMMON LAW.

EMPLOYERS' LIABILITY—EMPLOYEE ATTEMPTING RESCUE.—*Pittsburg, Cincinnati, Chicago and St. Louis Railway Company v. Lynch, Supreme Court of Ohio, 68 Northeastern Reporter, page 703.*—This was an action by one Lynch against the above-named railway company for injury received while in its employment as watchman at one of its crossings in the village of Dennison. Lynch was, at the time of the accident causing the injury, engaged in looking after the safety of a number of school children who were crossing the tracks, which were at that street ten in number, when, without warning, a caboose was kicked over the crossing on a track upon which a woman was standing, who was, as he believed, in danger of being run down by the caboose. She failed to observe his signal given by the use of the flag, and he then hastened to her rescue, pushing her from the track, in doing which he himself received serious injury. The caboose was moving at the rate of about 8 miles an hour, without any one on its forward end to give warning of its approach. Lynch sued in the circuit court of Tuscarawas County, alleging that the company was negligent in the manner of backing its caboose and in other respects, such negligence being alleged as the cause of his injury. The company denied that it was negligent, and pleaded that if Lynch was injured it was the result of his own carelessness. The circuit court gave Lynch judgment for damages, which, on appeal, was affirmed by the supreme court. The finding of the court is embodied in its syllabus in this case, which is as follows:

1. In an action to recover on account of injuries sustained in an effort to save human life, the conditions upon which there may be a recovery are "that the person whose rescue is attempted must be in a position of peril from the negligence of the defendant, and the rescue must not be attempted under such circumstances or in such a manner as to constitute recklessness." Those conditions appearing, a recovery will not be prevented by the fact that negligence of the person whose rescue is attempted contributed to his peril, nor by the fact that the plaintiff is an employee of the defendant.

INJUNCTION—ASSOCIATIONS—RIGHT TO EMPLOYMENT.—*Atkins et al. v. W. & A. Fletcher Company et al., Court of Chancery of New Jersey, 55 Atlantic Reporter, page 1074.*—In this suit Benjamin Atkins and others, members of the International Association of Machinists, prayed for a preliminary injunction against the W. & A. Fletcher Company and their associates, members of the New York Metal Trades Association. On hearing before Vice Chancellor Stevenson this injunction was denied. The conditions in the case and the law controlling are set forth in the remarks of Vice Chancellor Stevenson, from which the following is quoted:

The complainants, 46 in number, are machinists recently employed by the defendant corporation W. & A. Fletcher Company, but now on a strike. The complainants, "with certain other machinists, have formed a voluntary association for the purpose of bettering the condition of machinists in general and the members of such association in particular," which voluntary association is known as the International Association of Machinists. The bill sets forth that the defendant the W. & A. Fletcher Company, and some 30 or 40 individuals, partners and corporations, who are named, "have formed a voluntary association known as the New York Metal Trades Association," which is organized for the purpose of dealing with labor difficulties affecting the metal trades in New York Harbor. It further appears from the bill and accompanying affidavits that, "in order to carry out the design" of the International Association of Machinists, the complainants "have endeavored to obtain as many machinists as possible to join them," and have maintained a system of quiet, peaceable picketing in the streets near the machine shops of the W. & A. Fletcher Company. All unlawful practices in connection with this picketing are denied, and the bill sets forth in detail various reasons why, for the accomplishment of the objects of the complainants in their voluntary association, the maintenance of pickets is lawful and proper, if not necessary. The grievance of which the complainants complain is that the defendants, acting in combination, are interfering by intimidation, threats, violence, arrests, and other unlawful practices with the pickets of the complainants.

The complainants do not stand before the court as employees or persons seeking employment, whose natural expectation of obtaining work in machine shops is defeated because the defendants, by intimidation and molestation practiced upon the proprietors of the machine shops, constantly thwart them in their effort to get employment. In brief, the complainants stand before the court as employers, and not as employees.

It is true that the bill alleges that the "members of the New York Metal Trades Association have entered into a conspiracy to force and compel the complainants to work for the W. & A. Fletcher Company upon such terms as the W. & A. Fletcher Company may demand, and have conspired together for the purpose of preventing the complainants from earning a living at their trade as machinists, and that they are carrying out and effectuating the said conspiracy, and that they have discharged such of the complainants as have received employment from any of the members of such association as soon as they ascertained that the complainants were former employees of the Fletcher shops, and the only reason assigned was that the complainants are former employees at Fletcher's, on strike." This allegation of the bill seems to be based upon the erroneous idea that employers have not the right to combine freely to refuse employment to any kind or class of workmen precisely as employees have a right to combine freely to refuse to be employed by any employer who sees fit to employ workmen of whom they disapprove, or sees fit in any respect to conduct his business contrary to their views. But, apart from this consideration, the bill is not filed by the particular machinists who thus have been discharged to restrain defendants, acting in combination, from unlawful conduct which has secured their discharge, and now stands *in the way of their being employed by persons who, if left free, would*

be willing to give them work. The discharge of some of the complainants, whether procured lawfully or unlawfully, is not to be regarded, under the allegations of this bill, as a grievance of the particular workmen who have been so discharged. It must be regarded solely as a grievance on the part of the 46 complainants, as constituting the International Association of Machinists, and in their capacity as employers of labor, if such discharge can constitute a grievance of said association.

It also appears from the bill and affidavits that the International Association of Machinists have employed some of the complainants at a daily wage to do certain services which evidently may be all deemed embraced in the word "picketing," and that "many of the complainants have been so employed during said strike, and that they or most of them have been compelled to give up such employment by reason of the annoyance, insults, violence, force, intimidation, threats, unlawful arrests, and malicious prosecutions to which they were subjected by the Fletcher Company and the New York Metal Trades Association and their employees," etc. Here again we have a charge of unlawful conduct on the part of the defendants which has caused some of the complainants to be deprived of what is claimed to be a lawful employment, by which they may be said to be earning their living at a daily wage. But this bill is not filed by the complainants as pickets, as persons employed in a certain business whose opportunities for employment are cut off by the alleged unlawful conspiracy of the defendants. The interference with the work of the pickets must be regarded in this case as an alleged grievance of the International Association of Machinists.

This bill presents the complaint of this voluntary association, as a partnership, engaged in the accomplishment of certain objects, many of which are benevolent. Any intimidation or other interference with the pickets employed by the association may be regarded as a possible grievance of the association, but can not be regarded in this suit as a grievance of the pickets themselves. It will be time enough to consider any such grievance of the pickets when the pickets file their bill or bills for relief.

No question has been raised as to the capacity of the 46 machinists to file this bill on behalf of the entire voluntary association known as the International Association of Machinists, although the argument on both sides assumed that this international association embraces large numbers of machinists throughout various States of the Union. Confusion no doubt has resulted in the argument of this motion from the fact that 46 of a large number of partners or voluntary associates file a bill apparently for the protection of the right of the entire partnership or association to employ labor and to enjoy a free labor market, while the same bill sets up what might be deemed as separate causes of action in equity on the part of different sets of these 46 complainants seeking employment in their trade as machinists, or seeking employment in the business of picketing for a daily wage. All the allegations of this bill, although they may contain a large number of separate causes of action in equity on behalf of employees of one kind or another, whose right to make a living has been interfered with, must be considered solely with reference to the capacity in which the 46 complainants stand before the court, and the complaint which they make in such capacity. As I have said, the complainants stand before

the court as employers of labor, and their grievance is that the defendants, acting in combination, are unlawfully interfering with the right of the complainants as such employers of labor to have labor flow freely to them. (*Jersey City Printing Co. v. Cassidy*, 63 N. J. Eq. 759, 53 Atl. 230.) [See Bulletin of the Department of Labor, No. 45, p. 383.]

The mere statement of the nature of the complainants' case—the only case, as this bill is framed, which I think the court can now take cognizance of—indicates the fatal objection to granting in such case the remedy of injunction.

The mere fact that defendants, in combination, by molestation and intimidation, or by criminal violence, interfere with the free flow of labor to an employer, does not necessarily give such employer the right to come into a court of equity and procure an injunction for his protection. The employer, complainant, must show not only that the conduct of the defendants in combination unlawfully obstructs him, the complainant, in enjoying his natural expectancy in respect of the labor market, but that the natural and proximate result of the unlawful conduct complained of will be to inflict upon him, the employer, substantial money damages, for which the remedy at law is inadequate.

The right of partners or voluntary associates who are engaged in supporting a strike to freedom in the labor market, so that they can readily employ pickets and other agents in carrying on their side of the industrial war, has certainly never been recognized by a court of equity as a proper subject of protection by means of an injunction. No such right on the other hand has been recognized and protected for the benefit of persons engaged in resisting a strike. If the New York Metal Trades Association, with its large and powerful combination of employing partners, corporations, and individuals, should file a bill against the complainants to secure an injunction, protecting them, the Metal Trades Association, in employing detectives, agents, and pickets to assist the W. & A. Fletcher Company in this contest with its employees on strike, it seems to me the case would present the same fatal defect which is exhibited in this present case. What a court of equity will protect by an injunction in a proper case are the rights of the two parties directly interested in this conflict, W. & A. Fletcher Company and their employees—the right of the one to employ and the right of the other to be employed; the right of both to have a free labor market upon which the opportunity to make money and make a living depends. * * *

I do not want either party to this case to understand that I have undertaken to lay down with accuracy the entire strike law applicable to this present case or suggested by it. The primary rights which are violated by strikes and boycotts, and the remedial rights which thereby arise, are far from a condition of complete development or accurate definition. The law of this whole subject is to a large extent unsettled, and involved in dispute and difference of opinion among judges and text-writers. In this condition of the law it is certainly safe to hold that in a novel case like this a preliminary injunction, at least, ought not to be issued, where the complainants do not show any substantial pecuniary damage, and it appears that the defendants, or some of them, are amply responsible for any money damages which may be recovered against them in an action at law.

INJUNCTION—PICKETING—*W. & A. Fletcher Company v. International Association of Machinists et al., Court of Chancery of New Jersey, 55 Atlantic Reporter, page 1077.*—In this case the W. & A. Fletcher Company prayed for an injunction against the International Association of Machinists and others to restrain picketing by strikers. Restraining orders had been previously issued as against certain employees who had left the service of the complainants, and the prayer to make the injunction extend to all picketing was denied. The conclusion of the court and the reasons therefor appear in the following extract from the remarks of Vice Chancellor Stevenson, speaking for the court:

In the injunction suit brought by the Fletcher Machine Company against the International Association of Machinists and others the conclusion which I have reached is that the complainant is not entitled to any further preliminary restraint than that which is now embodied in the restraining orders. The motion was argued on both sides, practically with the admission that there was nothing objectionable in the restraining orders as they now stand; that those orders were proper, and should remain binding upon such of the defendants as stand fairly charged under oath with conduct which brings them within their reach.

The counsel for complainant practically confined his argument to the proposition that a preliminary injunction should go in the case to restrain picketing, without reference to the object of the picketing or its effect. If this view is correct, it follows that workmen maintaining a strike have no right to station pickets merely for the purpose of giving them such information in regard to their late employers' operations as may be discovered by ordinary observation. It seems to me that this claim is not well founded; that it is contrary to the great weight of reason as well as authority.

Picketing may be lawful; picketing may be unlawful. Whether picketing is lawful or unlawful depends wholly upon the purpose with which it is carried on, or perhaps, it would be more accurate to say, the effect which is produced by it. If the purpose and effect are to intimidate, to interfere with the liberty of workmen in seeking employment, to interfere with what in another case I called the employer's right to have labor flow freely to him, so that a reasonably courageous person would be restrained from offering his labor to such employer, then picketing is unlawful, and, where the other necessary conditions for the interference of a court of equity exist, will be prohibited by an injunction.

If, however, the picketing is carried on for the mere purpose of obtaining information, or for the purpose of conveying information to persons seeking or willing to receive the same, or even, in some cases, for the purpose of bringing orderly and peaceable persuasions to bear upon the minds of men who desire to listen to the same, the object of such persuasions not including in any way the disruption of an existing contract for labor, then there may be no unlawful element in the picketing, and carrying it on may found no action at law, and certainly may not call for any interference on the part of a court of equity.

The insistence of counsel for the complainants would seem to include the proposition that workmen on strike can not maintain pickets (although merely for the purpose of obtaining such information as can be procured by the use of the eyes and ears) without violating the employer's right to the enjoyment of a free labor market, and thereby causing him substantial and irreparable damage. This proposition seems to me to be utterly untenable. The restraining orders, therefore, will stand in their present form as against those defendants, as I stated, as are charged under oath with such conduct as brings them within their operation.

LABOR ORGANIZATIONS—CONTEMPT OF COURT—LIABILITY OF UNION—*Chicago Typothetæ et al. v. Franklin Union No. 4 et al.; People v. Franklin Union No. 4, Superior Court of Cook County, Legal News (verified report)*.—In this case Franklin Union No. 4, an incorporated union of employees, was before the court to show why it should not be held as for contempt for the violation of an injunction issued October 10, 1903. The bill charged that the union and its members and officers had conspired and confederated with each other, and with divers other unknown persons, unlawfully to obstruct and interfere with the business of the Typothetæ, a voluntary association of employers engaged in the business of printing and publishing, and prayed for an injunction restraining the union and its officers and members "from in any manner interfering with, hindering, obstructing, or stopping any of the business of the complainants, or their agents or employees, in the operation of their business," by trespass, threats, intimidation, violence, or unlawful persuasion. The injunction was granted as of the date given, to the effect above stated; it also forbade "picketing, patrolling or guarding the streets, avenues, gates and approaches, and places of business of complainants for the purpose of intimidating, threatening and coercing, or unlawfully persuading any of the complainants' employees, or of preventing persons seeking employment with them from going to and from their daily work at the places of business of complainants," etc.

An agreement as to wages had been made by the Typothetæ and the Franklin Union No. 4 on April 1, 1901, to continue until December 31 of that year, but was continued by tacit consent until abrogated September 27, 1903, by the action of the union declaring it "null and void," and a strike was agreed upon.

Further facts and the conclusions of the court appear in the following extracts from the remarks of Judge Holdom, who delivered the opinion:

The record of Franklin Union No. 4 shows that the strike benefit was to be limited to \$5 per week for single men, and \$7 per week for married men, and further provided that, "the levy of a special assessment of \$2 a week, the same to continue during the entire strike, until

suspended by act of the union, and to be levied on the entire membership who are employed; those on a strike to be excused during the term they are on strike, but the assessment to be enforced as soon as they secure work."

"That suitable headquarters be engaged on the south and west sides for the purpose of transacting the business of the union in regard to the strike."

The record shows further that, "the president on motion then appointed the following committees: Strike committee * * * conference committee * * * and visiting committee * * * also that President Woerner appointed Gorf, McCabe, Gondeck, Boettger, Mansfield and Kavanagh, assistant sergeant-at-arms.

The record in this case shows that a number of the members of Franklin Union No. 4 have been sentenced to fines and imprisonment for violations of the injunctive order in picketing and patrolling, in intimidating and in assaulting those working for, and others seeking employment with, complainants, members of the typotheta, and that assaults of employees have continued with little cessation in and about the plants of complainants and the homes of their employees; that members of the union have intercepted employees and intimidated and induced them to quit their employment; that headquarters were established at 14 Custom House Place, in the vicinity of the places of business of complainants, and that to that place members of Franklin Union No. 4 acting as pickets have taken employees of complainants who have been promised the payment of \$5 per week on condition that they quit their employment. It has further been proven that strike benefits, so-called, have been paid at this strike headquarters established pursuant to the resolution of Franklin Union No. 4 at its special meeting of September 27, 1903. It is in evidence that Woerner, the president, and Shea, the secretary and treasurer of the union, have been present in court on most of the occasions when its members have been on trial for a violation of the injunction in picketing, assaulting employees, etc., as well as the several times when the sentence of the court has been pronounced upon the persons adjudged guilty of violating the injunction. It also appears that Shea, as treasurer, paid strike benefits, so-called, to the members who formerly worked for complainants and who left their employ in accordance with the action of the union at its meeting on September 27 last; that there was no discrimination made against those members picketing and patrolling; they were paid strike benefits the same as noncombatants. It is in evidence that Kavanagh, the sergeant-at-arms, has been on the picket line and assaulted employees. Franklin Union No. 4, as appears from the statements of its counsel, is composed of about 1,800 persons, and not more than 200 of them are involved in the dispute existing between the union and the members of the Chicago Typotheta. It also appears that picketing and patrolling about the places of business of complainants were continuous from October 5 until November 21, the date of the filing of the petition against respondent for the rule to show cause herein.

From the affidavits in evidence in this case it appears that more than 50 people have been, since the inception of the difficulties set forth in the bill, assaulted, intimidated, called opprobrious epithets and threatened with harm, simply because they worked in a place vacated voluntarily by members of Franklin Union No. 4, all of the alleged

aggressors, with the exception of John Mucher, being members of the union, and John Mucher, condemned twice for assault and unlawful picketing in company with members of the union, in violation of the injunction, has been defended by the lawyer of the union. On October 13, 1903, D. E. Drydon, employed by Marsh & Grant, was knocked down by Assistant Sergeant-at-Arms Kavanagh of Franklin Union No. 4, and assaulted and kicked by other strikers; Bertha Kester was visited several times by John Hagberg, a member of the visiting committee of the union, also Etta Goellnick, visited by the same John Hagberg, Sophia Baumel also visited by said John Hagberg, all given the union card and offered money to quit their employment, and also threatened with harm, and in the case of Sophia Baumel told that her picture would be posted in the neighborhood where she resided as a "scab."

The primary question for solution is, is Franklin Union No. 4 under these evidential facts so connected with the violations by its members of the injunction as to make it a party to such violations and liable as for a contempt?

The bill charges a conspiracy to do unlawful acts against the complainants in impeding them in the free and lawful conduct of their business and affairs. The crucial test therefore is, does the evidence connect the union with this conspiracy, and, with either knowledge of, or acquiescence in, one or more of the acts proven and adjudged, to constitute a violation of the injunctive order?

The fountain source of the difficulties between the members of the Chicago Typothetae and Franklin Union No. 4 sprang from the actions of the union at its special meeting of September 27 last. Many of the acts there transpiring were in themselves lawful. The refusal further to abide by the agreement then in existence was a privilege accorded to the union by law, notwithstanding the reasons assigned for the action of the union may have been unwarranted or based upon false premises. The appointment of assistant sergeant-at-arms, a strike committee, a conference committee, and a visiting committee, the levying of a special assessment on employed members of \$2 a week, the ordering of the payment of \$5 and \$7 per week to single and married men respectively as strike benefits, and providing strike headquarters on the south and west sides of Chicago, in the light of subsequent events, were evidently made in anticipation of the strike which afterwards occurred, and of its maintenance by the union by unlawful methods. While the union disclaims all knowledge of picketing, interference, threats, assaults or other overt acts of violence by its members or officers, yet from the foregoing it abundantly appears that they prepared for a possible condition which immediately materialized in industrial warfare on the part of the union and its members against the employees of complainants; and after the inauguration of this hostile attitude we find Assistant Sergeant-at-Arms Kavanagh engaged in assaulting Drydon, an employee of complainants Marsh & Grant, and in endeavoring to induce others by threats on the one hand and promises on the other to quit their employment, and we find him taking such employees to the strike headquarters of the union in Custom House Place; and we also find John Hagberg, a visiting committeeman, interfering with Bertha Kester, Sophia Baumel and Etta Goellnick, employees of Shay, Smith & Co., by promises and threats and intimidation, and afterwards being followed on the street by a so-called colored picket named Crutchfield, calling them "scabs," and other

opprobrious names. We find further, that in pursuance of the union's resolution in paragraph nine, the members of the visiting committee received \$2.50 per day for each day's time lost, and we find all payments in connection with the strike being made at the strike headquarters in Custom House Place by Shea, treasurer of the union, from the funds of the union.

Bearing in mind that the charge in the bill is that of conspiracy, and that the acts enjoined were those used in furtherance of such conspiracy, it would seem from the evidential facts that the actions of the union at the meeting of September 27, in the establishment of the strike headquarters on Custom House Place, the assault and intimidation by Assistant Sergeant-at-Arms Kavanagh, and by visiting committeeman Hagberg, the payment of strike benefits at the strike headquarters by the union treasurer with the union money, and the fact that no discrimination was made against the members of the union known to be guilty of acts in themselves criminal, establish the union as a coconspirator with its offending members, party and privy to the violations of the injunction of which some of its members stand convicted, and therefore guilty of violation of the injunction and amenable to discipline for such violation providing it can be so disciplined under the law.

The liability of the respondent union rests upon the evidence arising from the record of its meeting of the 27th of September, last, the introduction of which was procured by the service of a subpoena duces tecum upon Shea as secretary. To the examination of Shea and to the inquiring into, examining or offering in evidence of the union's records counsel for the union objected. The objection, however, was general and therefore unavailing.

Conspiracy once established each conspirator becomes responsible for the means used by any conspirator in accomplishing the purpose of the conspiracy. (*State v. McCahill*, 30 N. Y. Rep. 553; *Lasher v. Litell*, 202 Ill. 551.)

No striking member of the union guilty of unlawful acts has been informed against to the municipal authorities, neither has his strike benefits been withheld, nor has any one of them been disciplined in the slightest manner.

That a corporation as such may be dealt with for the violation of an injunctive order as for a contempt of court is sustained by abundant authority, and is not seriously disputed by counsel for the respondent. [Cases cited.]

It appearing that Franklin Union No. 4, a corporation, is liable to a fine for violation of the injunction in this case, it but remains for determination as to what the amount of that fine shall be. Punishment is meted out in accordance with the gravity of the offense committed. The consequences of violation of the injunction by the union have been many assaults on innocent persons seeking to work under contracts satisfactory to themselves and their employers. There has been no discrimination between the sexes. Women have been assaulted and terrorized and followed to their homes and their families intimidated. Murder has even resulted from the unlawful acts of the union and its striking members. The complainants have been interfered with and arrested in the prosecution of their lawful affairs and business and have been put to great expense, annoyance and anxiety in asserting their rights before the law and in seeking the protecting arm

of this court. The violation of the injunction has necessitated many and frequent appeals to this court involving complainants in much additional legal expense. On the other hand there is no evidence, except inferentially, of what property or money the union is possessed; but it does appear from the records of the union, and the admissions of counsel, that the strike assessment is levied against not less than 1,500 of the working members of the union, and that the strike benefits are paid to not more than 200 of its striking members. Conceding that all of these striking members are married men, the weekly payments would amount to \$1,400, and the weekly receipts of the union from the strike assessment would amount to \$3,000, a difference upon the credit side of the union's ledger of \$1,600. To what purpose or use was it intended, when the assessment was made, to put this large weekly sum of money, and to what uses has it been put in fact during the continuance of this strike? It is true that the record is silent upon this question, but it does appear that the treasurer destroyed all evidence of his disbursements and to whom or upon what account the moneys of the union were paid out. What is the necessary inference from this condition? The union prepared for this strike by making this assessment. It must be assumed the money was needed for the purposes of the strike, and it does no violence to either reason or logic to assume that the necessary implication from this condition is, that the money is used to maintain the strike which has been and is carried on by unlawful methods, and that the money has been and is used for the purpose of discharging obligations thus incurred.

There is no reported case that I have been able to find of a fine having been imposed upon a labor union, probably for the principal reason that few of them are incorporated.

The evidence in this case shows that since the inauguration of this industrial controversy between Franklin Union No. 4 and the complainant members of the Chicago Typothetae, the union and its striking members have resorted to violence for the purpose of enforcing their demands, and as a *sine qua non* to the attainment of that purpose, if needs be, have sought to destroy the business and property rights of these several business houses. Such warfare can not and will not be tolerated by the courts in a land of peace, where the people are governed by law, and the law would be lacking in one of its most necessary attributes if it was impotent to punish for such violation.

The order of the court will be that the respondent, Franklin Union No. 4 of Chicago, be adjudged guilty of contempt of this court for its violation of the injunction order issued herein on the 10th day of October, 1903, and for such violation it is fined the sum of \$1,000, which it is ordered to pay to the clerk of this court within ten days of this date, and in default of such payment within said ten days a writ of *hæc facias* in the usual form is ordered to issue against it in the name of the people of the State of Illinois for its collection.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1896.

[The Second Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1896. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

ALABAMA.

ACTS OF 1903.

Act No. 57.—*Employment of children.*

SECTION 1. No child under the age of twelve (12) years shall be employed in or about any factory or manufacturing establishment within this State unless a widowed mother or aged or disabled father is dependent upon the labor of such child, or in case a child is an orphan and has no other means of support. No child under the age of ten (10) years shall be so employed under any circumstances.

Sec. 2. It shall be unlawful for any factory or manufacturing establishment to hire or to employ any child unless there is first provided and placed on file in the office of such employer an affidavit signed by the parent or guardian or person standing [in] parental relation thereto, certifying the age and date of birth of said child; any person knowingly furnishing a false certificate of the age of such child shall be deemed guilty of a misdemeanor, and shall be brought before some justice of the peace or other court or officer having jurisdiction for trial, and upon conviction shall be punished by a fine of not less than five nor more than one hundred dollars, or be sentenced to hard labor for a term not exceeding three months.

Sec. 3. No child under the age of thirteen (13) years shall be employed at labor or detained in any factory or manufacturing establishment in this State between the hours of 7 p. m. and 6 a. m. standard time, and no child under the age of sixteen (16) years shall be so employed or detained between said hours for more than forty-eight hours in any one week; and no child under the age of twelve shall be employed or detained in any factory or manufacturing establishment for more than sixty-six (66) hours in any one week.

Sec. 4. Any person, persons or corporation or representative of such corporation who violates any of the provisions of this act, or who willfully or knowingly suffers or permits any child to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not more than (\$200) two hundred dollars.

Approved February 25, 1903.

Act No. 94.—*Accidents on railroads.*

SECTION 18. Every person or corporation operating a railroad shall give notice to the commissioners of any accident happening on any portion of its line within this State, which is attended with serious injury to the person of any one, within twenty-four hours thereafter; and upon receiving such notice, or upon public rumor of such accident, one or more of the commissioners may repair to the scene of the accident, and inquire into the facts and circumstances thereof; and the result of such inquiry, with such details as may be deemed necessary, shall be entered upon the record of the proceedings of the commissioners, and embraced in their annual report.

Approved February 28, 1903.

Act No. 229.—*Children laboring to support parent in idleness.*

SECTION 1. * * * Any person who is able to work, and who does not work but hires out his minor children and lives upon their wages; * * * is hereby declared to be a vagrant and must on conviction be fined not more than five hundred (\$500) dollars and may also be imprisoned in the county jail or sentenced to hard labor for the county for not more than six months: *Provided*, That it shall be a sufficient defense to the charge of vagrancy under any of the provisions of this act that the defendant has made bona fide efforts to obtain employment at reasonable prices for

his labor, and has failed to obtain the same. The provisions of this act shall not apply to persons who are idle under strike orders or lockouts.

Approved September 22, 1903.

ACT No. 329.—*Boycotting, blacklisting, etc.*

SECTION 1. It shall be unlawful for two or more persons to conspire together for the purpose of preventing any person, persons, firm or corporation from carrying on any lawful business within the State of Alabama, or for the purpose of interfering with the same.

SEC. 2. It shall be unlawful for any person or persons to go near to or loiter about the premises or place of business, of any person, firm or corporation engaged in a lawful business, for the purpose of influencing or inducing others not to trade with, buy from, sell to or have business dealings with such person, firm or corporation, or to picket the works or place of business of such other person, firm or corporation for the purpose of interfering with or injuring any lawful business or enterprise: *Provided*, That nothing herein shall prevent any person from soliciting trade or business for a competitive business.

SEC. 3. It shall be unlawful to print or circulate any notice of boycott, boycott cards, stickers, dodgers or unfair lists, publishing or declaring that a boycott or ban exists or has existed or is contemplated against any person, firm or corporation doing a lawful business, or publishing the name of any judicial officer or other public official upon any black list, unfair list or other similar list because of any lawful act or decision of such official.

SEC. 4. It shall be unlawful to use force, threats or other means of intimidation to prevent any person from engaging in any lawful occupation at any place he or she sees fit.

SEC. 5. It shall be unlawful for any person, firm or corporation to maintain a black list or to notify any other firm or corporation that any person has been blacklisted by such person, firm or corporation, or to use any other similar means to prevent such persons from receiving employment. Any person, firm or corporation violating any provision of this act must, on conviction, pay a fine of not less than fifty (\$50) dollars, nor more than five hundred (\$500) dollars, or to be imprisoned not to exceed sixty days hard labor for the county.

Approved September 26, 1903.

ACT No. 405.—*Emigrant agents.*

SECTION 1. From and after the approval of this act no person shall carry on the business of an emigrant agent in this State with [without] having first obtained a license therefor from the State auditor.

SEC. 2. The terms "Emigrant Agent" as contemplated in this act, shall be construed to mean any person engaged in hiring laborers or soliciting emigrants in this State to be employed beyond the limits of the same.

SEC. 3. Any person shall be entitled to a license which shall be good for one year, upon payment into the State treasury for the use of the State of five hundred dollars in each county in which he operates or solicits emigrants for each year so engaged.

SEC. 4. Any person doing the business of an emigrant agent without having first obtained such license shall be guilty of a misdemeanor and upon conviction shall be punished by a fine of not less than five hundred dollars and not more than five thousand dollars or may be imprisoned in the county jail or sentenced to hard labor for the county for not less than four months nor more than one year for each and every offense within the discretion of the court.

Approved October 1, 1903.

ACT No. 480.—*Protection of employees as voters.*

SECTION 53. Any employer who attempts by coercion, intimidation, threats to discharge or to lessen the remuneration of an employee or to influence his vote in any election or who requires or demands an examination or inspection by himself or another of an employee's ballot, shall be guilty of a misdemeanor and upon conviction shall be fined not less than five hundred dollars.

SEC. 54. Any officer or agent of a corporation or other person with authority to discharge employees, who shall attempt by coercion, intimidation, threats to discharge or to lessen his remuneration any such employee to influence his vote in any election or who requires or demands an examination or inspection by himself or another of any employee's ballot shall be guilty of a misdemeanor and upon conviction shall be fined not less than five hundred dollars.

Approved October 9, 1903.

ARIZONA.**ACTS OF 1903.****Act No. 8.—Hours of labor in mines.**

SECTION 1. The period of employment of workmen in all underground mines or workings shall be eight hours per day, except in cases of emergency where life or property is in imminent [imminent] danger.

SEC. 2. Any person, body corporate, agent, manager or employer who shall violate any of the provisions of section 1 of this act shall be guilty of a misdemeanor, and on conviction therefor shall be fined in the sum of not less than one hundred dollars, nor more than three hundred dollars for each offense, the same to be collected as in other cases where fines are imposed.

Approved March 10th, 1903.

Act No. 34.—Hours of labor of railroad employees—Number of brakemen.

SECTION 1. No company operating a railroad in whole or in part within the Territory of Arizona shall require any conductor, engineer, fireman, brakeman, telegraph operator, or any employee who has worked in his respective capacity for sixteen consecutive hours, except in case of casualty, or actual necessity, to again go on duty, or perform any work until he has at least nine hours' rest.

SEC. 2. Any company which violates or permits to be violated any of the provisions of the preceding section or any officer or agent of such company who violates or permits to be violated any of the provisions of the preceding section, shall be punished by a fine of not less than \$50 nor more than \$300 for each and every violation thereof.

SEC. 3. It shall be unlawful for any such company referred to in section 1 of this act to allow any trains to be run on mountain divisions where the ruling grade is over ninety-five feet to the mile, unless there is a brakeman assigned to ever [every] 600 tons in such train while being handled on such grade.

For each violation of this section, penalty same as named in section 2.

Approved March 18th, 1903.

Act No. 58.—Payment of wages in scrip.

SECTION 1. All persons, firms, corporations and companies using coupons, script [scrip], punchouts, store orders or other evidences of indebtedness to pay their or its laborers or employees for labor, or otherwise, shall, if demanded, redeem the same in the hands of such laborer, employee, or bona fide holder, in lawful money of the United States: *Provided*, The same is presented and redemption demanded of such person, firm, company or corporation using same as aforesaid, at a regular pay day of such person, firm, company or corporation to laborers or employees or if presented and redemption demanded as aforesaid by such laborers, employees or bona fide holders at any time not less than thirty days from the issuance or delivery of such coupon, script [scrip], punchout, store order or other evidences of indebtedness to such employees, laborers or bona fide holder.

Such redemption to be at the face value of the said script [scrip], punchout, coupon, store order or other evidences of indebtedness.

Provided, further, Said face value shall be in cash, the same as its purchasing power in goods, wares and merchandise at the commissary company store, or other repository of such company store, [sic] firm, person or corporation aforesaid.

SEC. 2. Be it further enacted, that any employee, laborer or bona fide holder referred to in paragraph 1 of this act upon presentation and demand for redemption of such script [scrip], coupon, punchout, store order or other evidences of indebtedness aforesaid, and upon refusal of such person, firm, corporation or company to redeem the same in good and lawful money of the United States, may maintain in his, her, or their own name an action before any court of competent jurisdiction against such person, firm, corporation or company, using same as aforesaid, for the recovery of the value of such coupon, script [scrip], punchout, store order or other evidences of indebtedness, as defined in paragraph 1 of this act.

Approved March 19th, 1903.

ARKANSAS.

ACTS OF 1903.

ACT No. 4.—*Labor Day.*

SECTION 1. The first Monday in September of each year is hereby declared a public holiday to be known and designated as "Labor Day."

Approved January 29, 1903.

ACT No. 127.—*Employment of children.*

SECTION 1. No child under the age of twelve (12) years shall be employed in or about any factory or manufacturing establishment within this State, unless a widowed mother or totally disabled father is dependent upon the labor of such child, or in case a child is an orphan and has no other means of support. No child under the age of ten (10) years shall be so employed under any circumstances.

SEC. 2. It shall be unlawful for any factory or manufacturing establishment to hire or employ any child unless there is first provided and placed on file in the office of such employer an affidavit signed by the parent or guardian or person standing in parental relation thereto, certifying the age and date of birth of said child; any person knowingly furnishing a false certificate of the age of such child shall be deemed guilty of perjury, and upon conviction thereof, shall be punished as provided by law in all cases of perjury.

SEC. 3. No child under the age of fourteen (14) shall be employed at labor or detained in any factory or manufacturing establishment in this State between the hours of 7 p. m. and 6 a. m. or for more than sixty (60) hours in any one week or more than ten (10) hours in any one day.

SEC. 4. No child under the age of fourteen (14) shall be employed at labor in or about any factory or manufacturing establishment unless he or she can read and write his or her name and simple sentences in the English language.

SEC. 5. No child under the age of fourteen (14) years shall be employed at labor in or about any factory or establishment, unless such child attends school for at least twelve weeks of each year—six weeks of such schooling to be consecutive—the year to be counted from the last birthday of the child preceding such employment; and at the end of every year a certificate to the effect that the law has been complied with, signed by the teacher of the school or schools attended by the child during said year must be produced by the parent or person standing in parental relation to said child, and filed by the employer of said child. All such certificates shall be open to public inspection.

SEC. 6. Any person, persons, corporation or representative of such corporation who violates any of the provisions of this act, or who suffers or permits any child to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine of not more than five hundred dollars (\$500).

Approved April 8, 1903.

ACT No. 142.—*Employers to furnish names of employees to assessors, etc.*

SECTION 1. Hereafter any person, persons, partnership, company or corporation owning or operating any mill, mine, factory or any other manufacturing enterprise, shall be required to give the names of their agents, servants and employees to the tax assessors, sheriffs or tax collectors of the various counties when demanded in their official capacity.

SEC. 2. Any person, persons, partnership, company, corporations, or their agents, attorneys or managers, owning or operating any mill, mine, factory or other manufacturing enterprises, who shall violate section 1 of this act shall be guilty of a misdemeanor and fined in any sum not less than ten nor more than one hundred dollars.

Approved April 10, 1903.

ACT No. 144.—*Hours of labor of railroad employees.*

SECTION 1. Any company owning or operating a railroad over thirty miles in length in whole or in part within this State shall not permit or require any conductor, engineer, fireman, brakeman or any trainman on any train, or any telegraph operator who has worked in his respective capacity for sixteen consecutive hours, to again be required to go on duty or perform any work until he has had at least eight hours rest, except

in cases of wrecks or washout: *Provided*, That at the expiration of the said sixteen hours continuous service, the engineer and trainmen on any train, being at a distance not exceeding twenty-five miles from any division terminal or destination point, shall be permitted, if they so elect, to run said train into said division terminal or destination point: *It being further provided*, That the additional service permitted under this section not be so construed as to relieve any railway corporation from liabilities incurred under section three (3) of this act: *And, provided further*, That the provision of this act shall not apply to passenger trains.

SEC. 2. Any railroad company or corporation knowingly violating any of the provisions of this act shall be liable to a penalty of not less than one hundred dollars (\$100) nor more than two hundred dollars (\$200) for the first offense; for any subsequent offense, of not less than two hundred dollars (\$200) nor more than three hundred dollars (\$300), which shall be recovered in a civil action in the name of the State.

SEC. 3. In addition to the penalty prescribed herein any corporation violating the provisions of this act shall not be permitted to interpose the defense of contributory negligence in the event of action being brought to recover for damages resulting from any accident which shall occur and by which injury shall be inflicted on any employee who may be detained in service more than said sixteen hours, notwithstanding negligence of said injured employee may have caused his own injury or death; nor shall said defense of contributory negligence be interposed if the said injury result in death of said employee and the action is brought for the benefit of his next of kin.

Approved April 14, 1903.

ACT No. 147.—*Mechanics' liens—Personal property.*

SECTION 1. Blacksmiths and wheelwrights who perform work or labor for any person, if unpaid for the same, shall have an absolute lien on the product of their labor and upon all wagons, carriages, farm implements and other articles repaired by them, for such work or labor and for all materials furnished by them and used in such product or repairs.

SEC. 2. Any person having a lien under this act and desiring to avail himself of its provisions, shall within thirty days after such work or labor is done or performed, or materials furnished, file with the clerk of the circuit court of the county in which the debtor resides, a just and true account of the demand due, or becoming due after allowing all credits, and containing a description of the property to be charged with said lien, verified by affidavit.

SEC. 3. The clerk of the circuit court shall file such account and make an abstract thereof in the book of minutes of mortgages and deeds of trust of personal property, for which the clerk shall charge a fee of twenty-five cents, to be paid by the person filing such account.

SEC. 4. Liens accruing under this act may be enforced at any time within four months after such accounts are filed by suits as provided for the enforcement of laborers' liens in subdivision three of chapter ninety-nine of Sandels & Hill's Digest.

Approved April 15, 1903.

ACT No. 155.—*Payment of wages—Railroad employees to be paid when discharged.*

SECTION 1. Section 6243 of Sandels & Hill's Digest [shall] be amended so as to read as follows:

Section 6243. Whenever any railroad company or corporation or any receiver operating any railroad engaged in the business of operating or constructing any railroad or railroad bridge shall discharge, with or without cause, or refuse to further employ any servant or employee thereof, the unpaid wages of any such servant or employee then earned at the contract rate, without abatement or deduction, shall be and become due and payable on the day of such discharge or refusal to longer employ; and such servant or employee may request of his foreman or the keeper of his time to have the money due him, or a valid check therefor, sent to any station where a regular agent is kept; and if the money aforesaid, or a valid check therefor, does not reach such station within seven days from the date it is so requested, then as a penalty for such nonpayment the wages of such servant or employee shall continue from the date of the discharge or refusal to further employ, at the same rate until paid: *Provided*, Such wages shall not continue more than sixty days, unless an action therefor shall be commenced within that time.

(Became a law without the governor's approval, April 21, 1903.)

COLORADO.

ACTS OF 1903.

CHAPTER 70.—*Wages a preferred claim—In assignments, etc.*

SECTION 1. Hereafter, when the business of any person, corporation, company or firm shall be suspended by the action of creditors, or be put into the hands of a receiver or trustee, then in all such cases the debts owing to laborers, servants or employees, which have occurred by reason of their labor, or employment, shall be considered and treated as preferred claims, and such laborers or employees shall be preferred creditors, and shall first be paid in full, and if there be not sufficient to pay them in full the same shall be paid from the proceeds of the sale of the property seized: *Provided*, That any person interested may contest any such claim, or claims, or part thereof, by filing exceptions thereto, supported by affidavit, with the officer having the custody of such property, and thereupon the claimant shall be required to reduce his or her claim to judgment before some court having jurisdiction thereof before any part thereof shall be paid.

SEC. 2. Any laborer or servant desiring to enforce his or her claim for wages under this act, shall present a statement under oath showing the amount due, the kind of work for which such wages are due, and, when performed, to the officer, person or court charged with such property, within twenty days after the seizure thereof on any execution or writ of attachment, or within sixty days after same may have been placed in the hands of any receiver or trustee, and thereupon it shall be the duty of the person or court having or receiving such statement to pay the amount of such claim or claims to the person or persons entitled thereto.

SEC. 3. No claim under this act shall be paid until after the expiration of the time in which to present such claim. And if the funds realized from the sale of the property seized be insufficient to pay the total claims presented, then such funds shall be prorated on such claims: *Provided, however*, That the provisions [provisions] of the act shall not be construed to extend to creditors who held a duly recorded mortgage upon the property attached, which was given for a debt actually existing from such mortgage before the labor was performed.

Approved April 10, 1903.

CHAPTER 132.—*Exemption of wages from execution.*

SECTION 1. Section 1 of an act entitled "An act to amend an act entitled 'An act to exempt certain wages and earnings of debtors from levy and attachment for debt,' and acts amendatory thereof, approved March 28, 1885," approved March 2, 1894, is hereby amended so as to read as follows:

Section 1. There shall be exempt from levy under execution or attachment or garnishment, sixty per cent of the amount due for wages or earnings of any debtor at the time such levy is made under execution, attachment or garnishment of the same: *Provided*, Such debtor be, at the time of such levy under execution, attachment or garnishment, the head of a family or the wife of the head of a family, and such family resides in this State and is dependent, in whole or in part, upon such earnings for support: *Provided, further*, That when such wages or earnings do not exceed the sum of five dollars (\$5) per week, at the time such levy is made under execution, attachment or garnishment, then, all such wages or earnings shall be exempt.

Approved March 9, 1903.

CHAPTER 136.—*Arbitration of labor disputes.*

SECTION 1. Section 3 of an act entitled "An act creating a State and local board of arbitration for the adjustment of differences arising between employers and employees, and defining the powers and duties thereof, and making an appropriation therefor," approved March 31, 1897, is hereby amended so as to read as follows:

Section 3. The third member of said board shall be secretary thereof, whose duty it shall be, in addition to his duties as a member of said board, to keep a full and faithful record of the proceedings of the board and perform such clerical work as may be necessary for a concise statement of all official business that may be transacted. He shall be the custodian of all documents and testimony of an official character relating to the business of the board; and shall, also, have, under direction of a majority of the board, power to issue subpoenas, and to administer oaths to witnesses cited before the board, to call for and examine books, papers and documents necessary for exami-

nation in the adjustment of labor differences. If any person, having been served with a subpoena or other process issued by such board, shall willfully fail or refuse to obey the same, or to answer such questions as may be propounded touching the subject-matter of the inquiry or investigation, it shall be the duty of the district court or the county court of the county in which the hearing is being conducted, or of the judge thereof if in vacation, upon application by such board, duly attested by the chairman and secretary thereof, to issue an attachment for such witness and compel him or her to appear before such board and give his or her testimony, or to produce such books and papers as may be lawfully required by said board; and said court or judge thereof shall have power to punish for contempt, as in other cases of refusal to obey the process and [orders] of such court.

Sec. 2. Immediately after section 6 of said act there [shall] be inserted and added in said act a new paragraph, under the caption of section 6A, which shall be and read as follows:

"Said decision shall be binding upon the parties who join in said application for one year."

Sec. 3. Immediately after section 7, of said act, there [shall] be inserted and added in said act a new paragraph, under the caption of section 7A, which shall be and read as follows:

"In the event of a failure to abide by the decision of said board in any case in which both employer and employees shall have joined in the application, any person or persons aggrieved thereby may file with the clerk of the district court or the county court of the county in which the offending party resides, or in the case of an employer, in the county in which the place of employment is located, a duly authenticated copy of such decision, accompanied by a verified petition reciting the fact that such decision has not been complied with, and stating by whom, and in what respect it has been disregarded.

Thereupon the district court, or the county court (as the case may be), or the judge thereof, if in vacation, shall grant a rule against the party or parties so charged to show cause within ten days why such decision has not been complied with, which shall be served by the sheriff as other process. Upon return made to the rule, the court or the judge thereof, if in vacation, shall hear and determine the questions presented, and to secure a compliance with such decision, may punish the offending party or parties for contempt, but such punishment shall not extend to imprisonment, except in cases of wilful and contumacious disobedience.

Approved April 11, 1903.

CHAPTER 137.—*Employment of labor—Age not ground for discharge.*

SECTION 1. No person, persons, firm, association or corporation, carrying on or conducting, within this State, any business requiring the employment of labor, shall discharge any individual between the ages of eighteen and sixty years, solely and only upon the ground of age: *Provided, however,* That such individual is well versed in the line of business carried on by such person, persons, firm, association or corporation, and is qualified physically, mentally, and by training and experience, to satisfactorily perform and does satisfactorily perform the labor assigned to him, or for which he applies.

Sec. 2. Any person, persons, firm, association or corporation, or officer, agent or representative of such corporation, who violates, or permits to be violated, any of the provisions of the preceding section, upon conviction thereof, shall be fined not less than one hundred dollars, nor more than two hundred and fifty dollars, for each and every violation of this act.

Approved April 10, 1903.

CHAPTER 138.—*Employment of women and children.*

SECTION 1. It shall be unlawful for any person, agent, firm, company, copartner-ship, or corporation to require any child, either boy or girl, of sixteen years of age or less, to labor or work in any mill, factory, manufacturing establishment, shop or store, or in or about coal or other mines, or any other occupation not herein enumerated which may be deemed unhealthful or dangerous, for a greater number than eight hours in the twenty-four hour day, except in cases where life or property is in imminent danger, or in the week before and following Christmas day: *Provided,* That any child between the age of fourteen and sixteen years coming within the provisions of this act may be exempted from the provisions thereof, if in the opinion of the judge of the county court of the county in which said child resides it would be for its best interests to be so exempted. Application may be made in writing to any

county judge by any such child, its parent, or guardian, to be granted such exemption, when it shall be the duty of such judge to hear the same and inquire particularly into the nature of the employment sought. No fees shall be charged or collected in any such case.

SEC. 2. All paper mills, cotton mills and factories where wearing apparel for men or women is made, ore reduction mills or smelters, factories, shops of all kinds and stores may be held to be unhealthful and dangerous occupations within the meaning of this act at the discretion of the court.

SEC. 3. No woman of sixteen years of age or more shall be required to work or labor for a greater number than eight hours in the twenty-four hour day, in any mill, factory, manufacturing establishment, shop, or store for any person, agent, firm, company, copartnership or corporation, where such labor, work or occupation, by its nature, requires the woman to stand or be upon her feet, in order to satisfactorily perform her labors, work or duty in such occupation and employment.

SEC. 4. Any person who shall take, receive, hire or employ any child under the age of fourteen years in any underground works or mine, or in any smelter, mill or factory, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than fifty dollars, nor more than five hundred dollars, and shall be imprisoned in the county jail not less than thirty days, nor more than three months.

SEC. 5. Any person, agent, firm, company, copartnership or corporation which shall violate any of the provisions of this act or shall require a greater number of hours of work or labor than herein specified of any child, either boy or girl, of sixteen years of age or less, in any employment or occupation herein enumerated, or any other which shall be deemed by the courts as unhealthful, shall be deemed guilty of a misdemeanor, and shall be fined in a sum of not less than one hundred dollars (\$100), or more than five hundred dollars (\$500), or be imprisoned in the county jail for not less than two, or more than four months, or by both such fine and imprisonment, in the discretion of the court, for each offense.

SEC. 6. All district attorneys shall be required to make prosecutions for all violations of this act, upon the sworn complaint of any reputable citizen that this act is being violated by any person, firm, company, copartnership or corporation.

Approved April 11, 1903.

CHAPTER 144.—*Mine regulations.*

SECTION 1. Explosives must be stored in a magazine provided for that purpose alone; said magazine to be placed far enough from the working shaft, tunnel or incline to insure the same remaining intact in the event the entire stock of explosives in said magazine be exploded; all explosives in excess of the amount required for a shift's work must be kept in said magazine; no powder or other explosive be stored in underground workings where men are employed; each mine shall provide and employ a suitable device for thawing or warming powder and keep the same in condition for use; oils or other combustible substances shall not be kept or stored in the same magazine with explosives.

SEC. 2. The commissioner of mines of the State of Colorado shall have authority to regulate and limit the amount of nitro powder stored or kept in general supply stores in mining camps or mining towns where there is no municipal law governing the storage of same.

SEC. 3. No person shall, whether working for himself or in the employ of any person, company or corporation, while loading or charging a hole with nitroglycerin powder or other explosives, use or employ any steel or iron tamping bar; nor shall any mine manager, superintendent, foreman or shift boss, or other person having the management or direction of mine labor, allow or permit the use of such steel, iron or other metal [metal] tamping bar by employees under his management or direction.

SEC. 4. All old timber removed shall as soon as practicable be taken from the mine and shall not be piled up and permitted to decay underground.

SEC. 5. No person addicted to the use of intoxicating liquors or under eighteen years of age shall be employed as hoisting engineer.

SEC. 6. All hoisting machinery, using steam, electricity, air or hydraulic motive power, for the purpose of hoisting from or lowering into metalliferous mines employees and material, shall be equipped with an indicator, said indicator to be so placed near to and in clear view or hearing of the engineer.

SEC. 7. There shall be established by the commissioner of mines of the State of Colorado a uniform code of signals, embracing that most generally in use in metalliferous mines, which shall be adopted in all mines using hoisting machinery.

The code of signals shall be securely posted, in clear and legible form, in the engine room, at the collar of the shaft and at each level or station. In all shafts equipped with cages, such shafts and cages shall be fully equipped with a system of electric signals from cage and stations to engineer wherever possible.

SEC. 8. All mines having but one exit, and the same covered with a building containing the mechanical plant, furnace room and blacksmith shop, shall have fire protection, water if possible, and in mines where water is not available, chemical fire extinguishers or hand grenades shall be kept in convenient places for immediate use.

SEC. 9. All persons shall be prohibited from riding upon any cage, skip or bucket loaded with tools, timber, powder or other material, except for the purpose of assisting in passing same through shaft or incline, and then only upon special signal.

SEC. 10. All persons giving or causing to be given false signals, or riding upon any cage, skip or bucket upon signals that designate to the engineer that no employees are aboard, shall be deemed guilty of a misdemeanor.

SEC. 11. All shafts more than two hundred (200) feet in depth, equipped with hoisting machinery, shall be divided into at least two (2) compartments, and one compartment to be partitioned off and set aside for a ladderway. The ladder shall be made sufficiently strong for the purpose demanded, and in vertical shafts, landings shall be constructed not more than twenty (20) feet apart, said landings to be closely covered, except an opening large enough to permit the passage of a man; said ladders shall be inclined at the most convenient angle which the space allows, and shall be firmly fastened, and kept in good repair. In all incline shafts the landings shall be put in as above described, but a straight ladder on the incline of the shaft.

Ladders in upraises and winzes shall be likewise provided and kept in repair, but where winzes connecting levels are used, only for ventilation and exit, only one such winze on each level need be equipped.

SEC. 12. Hereafter shafts equipped with buildings and machinery, with only the working shaft for exit, shall be divided into at least two (2) compartments, one of which shall be tightly partitioned off and used as a ladderway as hereinbefore provided for; said ladderway shall be securely bulkheaded at a point at least twenty-five feet below the collar of the shaft, and below this bulkhead a drift shall be run to the surface, if location of shaft is upon a side hill; if location of shaft is upon a level, the drift shall be run to a safe distance without the walls of the building and from there upraised to the surface. Said ladderway and landings shall be kept at all times in good repair and afford easy mode of escape in event of fire.

SEC. 13. Hereafter all tunnels or adit levels at a safe distance from mouth of same shall connect with the surface, and be provided with safe and suitable ladders, and thus afford a means of exit in case of fire destroying the buildings over the mouth of tunnel or adit level.

SEC. 14. Employees engaged in sinking shaft or incline, shall at all times be provided with chain or other kind of ladder so arranged as to insure safe means of exit.

SEC. 15. In all shafts, hereafter constructed, collars of same shall be protected in such manner that persons or foreign objects can not fall into the shaft. In all shafts equipped with cages, safety clutches shall be used. In shafts equipped with buckets, shaft doors must be constructed which will prevent any material falling into shaft from dumping.

SEC. 16. All stations or levels shall, when practicable, have a passageway around the working shaft, so that crossing over the working compartment can be avoided. At all shaft stations a guard rail or rails shall be provided and kept in place across the shaft, in front of the level, so arranged that it will prevent persons from walking, falling or pushing a truck, car or other conveyance into the shaft. All winzes and mill holes extending from one level to another shall be covered or surrounded with guard rails, to prevent persons from stepping or falling into the same.

SEC. 17. When any shaft is sunk on a vein, ore shoot [chute] or body, a pillar of ground shall be left standing on each side of the shaft of sufficient dimensions to protect and secure the same, and in no case shall stopping [stoping] be permitted up to or within such close proximity to the shaft as to render the same insecure, until such time as the mine is to be abandoned and said pillar withdrawn.

SEC. 19. Any person or persons removing or destroying any covering or fencing placed around or over any shaft, pit or other excavation, as hereinbefore provided, shall be deemed guilty of a misdemeanor and upon conviction thereof in any court of competent jurisdiction shall be fined in a sum of not less than fifty dollars (\$50) nor more than three hundred dollars (\$300) or imprisonment in the county jail for six months, or by both fine and imprisonment.

SEC. 20. Any owner, person or persons operating any metalliferous mine, mill or metallurgical plant and employing two or more men shall report to the bureau of mines and state when work is commenced and when stopped, and mines working continuously shall report on or before November 1 of each year, together with the names of the owners and managers or lessee in charge of said work, together with the

post-office address; the name of the claim or claims to be operated, the name of the county and mining district, together with the number of men employed, directly or indirectly, the same being classified into miners, trimmers, timbermen, ore sorters, millmen, [...] teamsters, etc. The necessary blanks to carry out the provisions of this section shall be furnished upon application by the commissioner of mines.

SEC. 21. Any owner, lessee, manager, superintendent or foreman in charge of any metalliferous mine, mill or metallurgical plant who shall willfully misrepresent or withhold facts or information from any inspector or other officer of the bureau of mines, regarding the mine, such as length of time timbers have been in place, or making any misrepresentations tending to show safety when the reverse is true, shall be deemed guilty of a misdemeanor, and upon conviction thereof in any court of competent jurisdiction, shall be fined in any sum not less than one hundred dollars, nor more than three hundred dollars.

SEC. 22. Strangers or visitors shall not be allowed underground in any mine, unless accompanied by the owner, official or employee deputized to accompany them.

SEC. 23. Notice of the maximum number of men permitted to ride upon or in the cage, skip or bucket, at one time, shall be posted at the collar of the shaft and each level. All men or employees riding upon or in an overloaded cage, skip or bucket as provided in notice so posted, shall be guilty of a misdemeanor, and upon conviction in a competent court, shall be fined not less than five dollars nor more than fifty dollars for each and every offense.

SEC. 24. Any owner, agent, manager or lessee, whether individual, partnership or corporation, having charge or operating any metalliferous mine, mill or metallurgical plant, whenever loss of life or accident serious enough in character to cause the injured party to stop work for two consecutive days, and connected with the workings of such metalliferous mine, mill or metallurgical plant, shall occur, shall give notice immediately and report all the facts thereof to the commissioner of mines. The refusal or failure of the said owner, agent, manager or lessee, to so report within a reasonable length of time shall be deemed a misdemeanor and shall upon conviction be subject to a fine of not less than fifty dollars (\$50) nor more than three hundred dollars (\$300), or be imprisoned not less than one or more than three months, or by both such fine and imprisonment. The commissioner of mines, upon receipt of notice of accidents, shall investigate the causes and make or cause to be made a report, which report shall be filed [filed] in his office for future reference.

SEC. 25. The commissioner of mines of the State of Colorado, inspectors, or either thereof, shall have power to make such examination or inquiry as is deemed necessary to ascertain whether the provisions of this act are complied with; to examine into and make inquiry respecting the condition of any mine, mill or metallurgical plant, or part thereof, and all matters or things connected with or relating to the safety of the persons employed in or about the same; to examine into and make inquiry respecting the condition of the machinery or mechanical device, and, if deemed necessary, have same tested; to appear at all coroners' inquests held, respecting accidents, and if deemed necessary, call, examine and cross-examine witnesses; to exercise such other powers as are necessary for carrying this act into effect.

SEC. 26. Any owner, agent, manager or lessee, whether individual, partnership or corporation, operating a metalliferous mine, mill or metallurgical plant in this State, who fails to comply with the provisions herein set forth, or either or any thereof, shall be deemed guilty of a misdemeanor, and when not otherwise provided, shall be liable to a fine of not less than twenty-five dollars (\$25) nor more than three hundred dollars (\$300), for each provision not complied with, and each day after conviction of failure to comply with any provision hereof, shall be deemed a separate offense and punished accordingly.

The district attorney of the district in which such mine, mill or metallurgical plant is situated, is hereby empowered and directed to bring an action in the name of the people of the State of Colorado against such owner, agent, manager or lessee, whether individual, partnership or corporation, operating such metalliferous mine, mill or metallurgical plant when he is not complying with the provisions of this act, or any part thereof, or for the violation of any rule made in conformity with this act by the commissioner of mines of the State of Colorado. Such penalty when recovered shall be turned over by such district attorney to the treasurer of the State of Colorado for the benefit of the general school fund of the State of Colorado.

SEC. 27. Justices of the peace in their respective counties, shall have jurisdiction in prosecutions for the violation of this act, subject to the right of appeal as now provided in cases of assault and battery.

Approved April 10, 1903.

CHAPTER 145.—*Mine regulations—Inspectors of metalliferous mines.*

SECTION 1. Section 3 of said act [Chapter 119, session laws of 1899,] is hereby amended to read as follows:

SEC. 3. The commissioner of mines shall divide the State into three metalliferous mining districts and shall, with the consent of the governor, appoint three (3) inspectors of practical experience in mining, citizens of the United States and legal voters of the State of Colorado, and having had not less than seven (7) years' practical experience in mining in the State of Colorado, who shall hold their office for the term of two (2) years. Immediately after such appointment of said inspectors the said commissioner of mines shall assign an inspector to each of said districts and said inspector so assigned shall maintain a branch office in one county of his district wherein extensive mining is carried on, and the said commissioner of mines shall have authority to require that said inspector shall during his terms of office, or such part thereof as he may determine, remain in the district to which he is appointed, wherein extensive mining is carried on, and whose additional duties shall be as hereinafter specified, and he shall appoint a clerk who must have a general knowledge of mineralogy, and shall act as assistant curator for the State mineral collection; and before entering upon the discharge of their duties shall subscribe to the oath required by the constitution, and each give bond to the State in the sum of \$5,000, to be approved by the governor, conditioned upon the faithful performance of their duties, respectively; said bonds shall, together with the commissioner's bond, be deposited with the secretary of state. The commissioner of mines may appoint a stenographer, who shall act as assistant clerk, and such other competent assistants as he may deem necessary for the carrying out of the object of this act; provided appropriation be made therefor, and shall have power, with the consent of the governor, at any time, to remove the inspectors, clerks or other assistants for incompetency, neglect of duty or abuse of the privileges of his office.

Approved April 11, 1903.

CONNECTICUT. (a)

ACTS OF 1903.

CHAPTER 130.—*Examination and licensing of barbers.*

SECTION 1. The board of examiners appointed under section 4671 of the general statutes shall have the power to adopt such rules and regulations as they may deem necessary to procure the proper sterilizing of tools and implements used by barbers in the practice of their occupation in this State, and for any other purpose that they may deem necessary to improve the sanitary condition of barber shops and their surroundings. Said rules shall be submitted to the State board of health and, upon being approved by said board, shall be in full force and effect. A printed copy of every such rule shall be mailed to every licensed barber in this State.

SEC. 2. The members of the examining board shall have full power to enter in business hours and inspect all barber shops in the State regarding their sanitary and cleanly condition. If said examining board shall find a shop that is unsanitary, they shall report the name of the proprietor and the street and number of the place of business to the town, city, or borough health officer of the place in which it is located, who shall at once order the shop put in a sanitary condition or closed.

SEC. 3. All licenses to barbers that have been issued by the board of examiners in this State shall expire on the first day of October, 1903, and each year thereafter. No person shall carry on the occupation of a barber in this State after October 1, 1903, until he shall have made application to the board of examiners for the renewal of the license which he holds. Said application for the renewal of a barber's license shall be in writing, addressed to the board of examiners, and signed by the party applying for such renewal. The board of examiners shall not renew any barber's license unless the application for renewal be received by said board within thirty days after the expiration of such license.

SEC. 4. Said board of examiners shall, on the first day of October, 1903, and annually thereafter, issue to every licensed barber in this State, presenting an application for renewal of his license bearing the date of his insignia card and accompanied by a renewal fee of one dollar, a receipt stating the fact of such payment, which receipt shall be a license to follow said occupation for one year from the date of its issue.

SEC. 5. Any licensed barber who shall practice the occupation of a barber in this State after the expiration of his license, without renewing the same, or who shall fail to comply with an order, regulation, or rule that may be adopted by the board of

(a) For other legislation of the session of 1903, see Bulletin 50, pp. 209, 210.

examiners and approved by the State board of health, shall forfeit his right to a license and be compelled to pay a fine of not more than fifty dollars for said violation.

Approved June 3, 1903.

FLORIDA.

ACTS OF 1903.

CHAPTER 5161.—*Seamen—Employers' advances—Violation of contract of employment.*

SECTION 1. Whoever enters into a written agreement with any master or owner of a vessel to perform certain services upon said vessel as seaman or sponge fisherman for a contemplated voyage and receives or accepts any money or goods, wares or merchandise, as advances or bounty for the performance of said services, and shall willfully and without just cause refuse to perform said services or to go on said vessel at the time of the sailing of the same, shall be guilty of a misdemeanor, and shall, upon conviction, be punished by a fine not to exceed five hundred dollars, or be imprisoned in the county jail for a period not to exceed twelve months.

(Became a law without the approval of the governor.)

CHAPTER 5164.—*Sunday labor—Newspapers.*

SECTION 1. Nothing contained in the laws of Florida shall be so construed as to prohibit the preparation or printing between the hours of midnight Saturday and six in the morning, Sunday, of any newspaper intended to be circulated and sold on Sunday, or to prohibit the circulation and sale on Sunday of same, or to prohibit the circulation and sale on Sunday of any newspaper theretofore printed.

Approved May 15, 1903.

CHAPTER 5192.—*Emigrant agents.*

SECTION 1. All persons, whether acting as individuals, or as emigration agents, or the employer or employee of such agents, who shall seek to influence and by such persuasions cause the removal of any inhabitant from this State, or who shall seek to entice away from this State labor in this State by any representations whatsoever, shall be considered emigration agents, and as such shall be subjected to a license tax of five hundred dollars (\$500), which sum shall be collected in each county where any such business is carried on.

SEC. 2. In case any emigrant agent or representative of such agent, or other person, attempts to carry on any business in any county of this State without first having paid the license tax as required in section 1 of this act, then such person shall be liable to arrest and upon trial and conviction shall be fined not less than one hundred dollars nor more than five hundred dollars, or to a sentence in the county jail of not less than sixty days, nor more than six months, or both by such fine and imprisonment.

Approved June 1, 1903.

CHAPTER 5212.—*Right of action for personal injuries.*

SECTION 1. Whoever through culpable negligence, or a reckless disregard for the safety of others, inflicts any personal injury or injuries upon another, not resulting in death, shall be punished by imprisonment in the county jail not exceeding one year or by fine not exceeding one thousand dollars, or by both such fine and imprisonment.

(Became a law without the approval of the governor.)

IDAHO.

ACTS OF 1903.

Fire escapes on factories, etc.

(Page 148.)

SECTION 1. It is hereby made the duty of every person, firm or corporation, or his or its agents, officers or trustees owning or having the management or control of any * * * factory or other structure over two stories in height to provide and furnish such building with safe and suitable metallic, iron or fireproof ladders of sufficient strength and permanently and securely attach the same to the outside or outer walls of such buildings in such manner and in such position as to be adjacent to the windows and convenient and easy of access to the occupants of such buildings in case of fire.

Sec. 2. Such metallic, iron or fireproof ladders must connect with each floor above the first, and be well fastened and secure and of sufficient strength and extent from the first story to the upper stories of such building or to the cornice thereof.

Sec. 4. Any person, firm or corporation, or his or its agents, officers or trustees, who shall fail to comply with the provisions of this act shall be guilty of a misdemeanor, and on conviction thereof shall be punishable by imprisonment in the county jail for not less than three nor more than six months, or by a fine of not less than two hundred dollars (\$200), nor more than three hundred dollars (\$300), or by both such fine and imprisonment.

Approved the 3rd day of March, 1903.

KANSAS.

ACTS OF 1903.

CHAPTER 70.—*Examination and licensing of barbers.*

SECTION 1. It shall be unlawful for any person to follow the occupation of a barber in this State, unless he shall have first obtained a certificate of registration as provided in this act: *Provided, however*, That nothing in this act contained shall apply to or affect any person who is now actually engaged in such occupation, except as herein-after provided: *Provided*, That the provisions of this law shall not apply to barbers in any city, town or village containing less than three thousand inhabitants.

Sec. 2. A board of examiners, to consist of three persons, citizens of this State for at least three years prior to their appointment, is hereby created to carry out the purposes and to enforce the provisions of this act. Such board shall be appointed by the governor: *Provided*, That all barbers must have had at least a practice of at least five years at the said occupation prior to their appointment. Each member so recommended shall appear before the State board of health, whose duty it shall be to determine whether or not such member possesses sufficient knowledge of inoculable contagious and inoculatus diseases to enable such member to pass judiciously upon the qualifications of others in the occupation of barber. If said board of health shall reject an appointee, then the governor shall appoint some one else in place of the person rejected, such appointment to be made from the same class of persons from which the appointment was made. If, on the other hand, the appointment be confirmed by the board, said board shall issue a certificate to that effect, and all appointments made under the provisions of this act shall date from the confirmation thereof by said State board. Each member of said board shall serve for a term of three years and until his successor is appointed and qualified, except in the case of the first board, whose members shall serve one, two and three years, respectively, as specified in their appointment. Said board shall, with the approval of the State board of health, prescribe such sanitary rules as it may deem necessary, with particular reference to the precautions necessary to be employed to prevent the creating and spreading of infectious or contagious diseases. A copy of such rules shall be furnished each person to whom a certificate of registration is granted. Each member of said board shall, before entering upon the discharge of his duties, give a bond in the sum of two thousand dollars, with a surety or sureties to be approved by the secretary of state, conditioned for the faithful performance of his duties, and shall take the oath provided by law for public officers. Vacancies upon said board caused by death, resignation or expiration from any cause of the term of any member thereof shall be filled by appointment from the same class of persons to which the deceased or retiring member belonged.

Sec. 3. Said board shall elect a president, secretary, and treasurer, shall have its headquarters at such place in the State as the board may determine, shall have a common seal, and the secretary and president shall have the power to administer oaths. A majority of said board may, in meeting duly assembled, perform the duties and exercise the powers devolving upon said board under the provisions of this act.

Sec. 4. Each member of said board shall receive a compensation of three dollars per day for his services, and also railroad fare and such other traveling expenses as may be necessary in the proper discharge of his duties, and shall be paid out of any money in the hands of the treasurer of the said board. Said board shall also be allowed for such other expenditures and outlays, payable out of the moneys in the hands of its treasurer, as shall be reasonable and proper for the discharge of their duties and to carry out the provisions of this act.

Sec. 5. Said board shall report to the auditor of this State at each of its regular meetings a full statement of the receipts and disbursements of the board during the preceding two years, a full statement of its doings and proceedings, and such recom-

mendations as it may deem proper looking to the better carrying out of the intent and purpose of this act. Any money in the hands of the treasurer of said board at the time of making such report in excess of two hundred and fifty dollars shall be paid over to the State treasurer for the maintenance of the public schools of this State.

SEC. 6. Such board shall hold public examinations at least four times in each year, at such times and places as it may deem advisable; notice of such meeting to be given by publications thereof at least ten days prior to such meetings in at least two newspapers published in this State, in the locality of such proposed meeting.

SEC. 7. Every person now engaged in the occupation of barber in this State shall, within ninety days after the approval of this act, file with the secretary of said board an affidavit setting forth his name, residence, and the length of time during which and the place where he has practiced such occupation, and shall pay to the treasurer of said board one dollar, and a certificate of registration entitling him to practice the said occupation for the fiscal year ending January 31, 1904, thereupon shall be issued to him; and the holders of such certificates shall, within thirty days after the expiration of their respective certificate, make application for the renewal of the same, stating the number of expiring certificates, and shall in each case pay to the treasurer of said board the sum of one dollar therefor. For any and every license or certificate given or issued by the board a fee of one dollar shall be paid by the person receiving the same.

SEC. 8. Any person not following the occupation of a barber at the time this act goes into operation, desiring to obtain a qualified certificate of the said occupation in this State, shall make application to said board therefor, and shall pay to the treasurer of said board an examination fee of five dollars, and shall present himself at the next regular meeting of the board for the examination of applicants; whereupon said board shall proceed to examine such person, and, being satisfied that he is above the age of nineteen years, of good moral character, free from contagious or infectious diseases, has either (a) studied the trade for two years as an apprentice under a qualified and practicing barber, or (b) studied the trade for at least two years in a properly appointed and conducted barber school or college under the instructions of a qualified barber, or (c) practiced the trade in another State for at least two years, and is possessed of the requisite skill in said trade to properly perform all the duties thereof, including his ability in the preparation of the tools, shaving, hair-cutting, and all the duties and services incident thereto, and is possessed of sufficient knowledge concerning the common diseases of the face and skin to avoid the aggravation and spreading thereof in the practice of said trade, shall enter his name in the register hereafter provided for, and shall issue to him a certificate of registration authorizing him to practice said trade in this State: *Provided*, That whenever it appears that applicant has acquired his knowledge of said trade in a barber school or college, the board shall be judges of whether said barber school or college is properly appointed and conducted and under proper instructions to give sufficient training in said trade. All persons making such application for examination under the provisions of this act shall be allowed to practice the occupation of barbering until the meeting for the next regular examination by the said board, and no longer, and the secretary shall give him a permit to do so: *Provided, however*, That such time may be extended by the board for good cause shown.

SEC. 9. Nothing in this act shall prohibit any person from serving as an apprentice in said trade under license issued by the board, under a barber authorized to practice the same under this act, nor from serving as a student in any school or college for the teaching of said trade, under the instructions of a qualified barber: *Provided*, That in no barber shop shall there be more than one apprentice to two barbers authorized under this act to practice said occupation, but all barber shops having one chair shall be entitled to one apprentice: *And provided*, That all barber schools or colleges shall keep prominently displayed a sign, "barber college" or "barber school," and no other sign or signs: *Provided*, That all barbers or barber schools or colleges who shall take an apprentice or student shall file immediately with said board the name and age of such apprentice or student, and the said board shall cause the same to be entered in a register kept for that purpose.

SEC. 10. Said board shall furnish to each person to whom a certificate of registration is issued a card or certificate, in such form as it shall adopt, bearing the seal of the board and the signature of its president and secretary, certifying that the holder thereof is entitled to practice the occupation of barber in this State, and it shall be the duty of the holder of such card or insignia to post the same in a conspicuous place in front of his working chair, where it may be readily seen by all persons whom he may serve.

SEC. 11. Said board shall keep a register, in which shall be entered the names of all persons to whom certificates are issued and to whom permits for serving appren-

ticeship or as students are granted under this act, and said register shall at all times be open to public inspection.

SEC. 12. Said board shall have power to revoke any certificate of registration granted by it under this act for (a) conviction of crime, (b) habitual drunkenness, (c) gross incompetency, (d) failure or refusal to properly provide or guard against contagious or infectious disease or the spreading thereof in the practice of the occupation aforesaid, or (e) violation of the rules of the board mentioned in section 2 of this act: *Provided*, That before any certificate shall be so revoked, the holder thereof shall have notice in writing of the charge or charges against him, and shall at a day specified in said notice, at least five days after the service thereof, be given a public hearing on said charges, and full opportunity to produce testimony in his behalf and to confront the witnesses against him. Any person whose certificate has been so revoked may, after the expiration of ninety days, apply to have the same regranted to him, upon a satisfactory showing that the disqualification has ceased.

SEC. 13. Any person who is engaged in the occupation in shaving the beard or cutting or dressing the hair for the general public shall be construed as practicing the occupation of barber, and the so said barber or barbers shall be required to fulfill all requirements of this act.

SEC. 14. Any person practicing the occupation of barber without having obtained a certificate of registration as provided in this act, or knowingly employing a barber who has not such certificate, or falsely pretending to be qualified to practice as barber or instructor or teacher of said occupation under this act, or failing to keep the certificate or card mentioned in section 10 of this act properly displayed, or failing to comply with such sanitary rules as the board in conjunction with the State board of health prescribes, or for the violation of any of the provisions of this act, shall be deemed guilty of a misdemeanor, and the board shall proceed against all such persons, and upon conviction thereof they shall be punished by a fine of not less than ten dollars nor more than one hundred dollars, or by imprisonment in the county jail not less than ten days or more than ninety days. Prosecutions under this act shall be begun and carried on in the same manner as other prosecutions for misdemeanors in this State.

Approved February 27, 1903.

CHAPTER 222.—*Protection of employees as members of labor organizations.*

SECTION 1. It shall be unlawful for any individual or member of any firm, or any agent, officer or employee of any company or corporation, to coerce, require, demand or influence any person or persons to enter into any agreement, either written or verbal, not to join or become or remain a member of any labor organization or association, as a condition of such person or persons securing employment, or continuing in the employment of such individual, firm, or corporation.

SEC. 2. Any individual or member of any firm or any agent, officer or employee of any company or corporation violating the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in a sum not less than fifty dollars or imprisoned in the county jail not less than thirty days.

Approved March 13, 1903.

CHAPTER 310.—*Inspection of factories, etc.—Fire escapes.*

SECTION 1. Every building now or hereafter used, in whole or in part, as a public building, * * * shall, within six months after the passage of this act, be provided with one or more metallic ladders or stair fire escapes attached to the outer walls thereof, and extending from or suitably near the ground to the uppermost story thereof, with platforms of such forms and dimensions, and in such proximity to one or more windows of each story above the first as to render access to such ladders or stairs from each such story easy and safe; the number, location, material and construction of such escapes to be subject to the approval of the fire marshal, chief of the fire department, city or town marshal, or such other authority as may have the control of fire regulations in any city or town where such buildings are located: *Provided, however*, That all buildings more than two stories in height, used for manufacturing purposes, * * * shall have at least one such fire escape for every thirty persons for which working, * * * accommodations are provided above the second stories of said buildings; * * *

Approved February 28, 1903.

CHAPTER 356.—*Inspection of factories, etc.—Fire escapes—Safety appliances.*

SECTION 1. Every person owning or operating any manufacturing establishment which may contain any elevator, hoisting shaft or wellhole shall cause the same to be properly and substantially enclosed or secured, in order to protect the lives or limbs of those employed in such establishment.

SEC. 2. Proper and substantial hand rails shall be provided in all stairways in manufacturing establishments. The stairs shall be properly secured at the sides and ends, and all doors leading into such establishments shall be so constructed as to open outwardly, and shall be neither locked, bolted nor fastened during working hours.

SEC. 3. In all manufacturing establishments three or more stories high, at least one fire escape, and as many more as may be reasonably necessary, shall be provided on the outside of said establishment, connecting with each floor above the first, well fastened and secured, and of sufficient strength. Each of said fire escapes shall have landings or balconies not less than six feet in length and three feet in width, guarded by iron railings not less than three feet in height, and embracing at least two windows at each story, and connecting with the interior by easily accessible and unobstructed openings, and the balconies or landings shall be connected by iron stairs not less than eighteen inches wide, the steps not to be less than six inches tread, placed at a proper slant, and protected by a well-secured hand rail on each side, with twelve-inch drop ladder from the lower platform reaching to the ground.

SEC. 4. Every person owning or operating any manufacturing establishment in which machinery is used shall furnish and supply for use therein belt shifters, or other safe mechanical contrivance, for the purpose of throwing on or off belts or pulleys; and wherever it is practicable machinery shall be operated with loose pulleys. All vats, pans, saws, planers, cog gearing, belting, shafting, set-screws and machinery of every description used in a manufacturing establishment shall, where practicable, be properly and safely guarded, for the purpose of preventing or avoiding the death of or injury to the persons employed or laboring in any such establishment; and it is hereby made the duty of all persons owning or operating manufacturing establishments to provide and keep the same furnished with safeguards as herein specified.

SEC. 5. If any person employed or laboring in any manufacturing establishment shall be killed or injured in any case wherein the absence of any of the safeguards or precautions required by the act shall directly contribute to such death or injury, the personal representatives of the person so killed, or the person himself, in case of injury only, may maintain an action against the person owning or operating such manufacturing establishment for the recovery of all proper damages. In cases where the action is brought by the personal representative of the deceased, said action shall be governed in all respects not herein provided for by the provisions of the statutes now in force which authorize and regulate the bringing of actions to recover damages in cases where the death of one is caused by the wrongful act or omission of another: *Provided*, Action shall be commenced in the county where the accident occurred.

SEC. 6. In all actions brought under and by virtue of the provisions of this act, it shall be sufficient for the plaintiff to prove in the first instance, in order to establish the liability of the defendant, that the death or injury complained of resulted in consequence of the failure of the person owning or operating the manufacturing establishment where such death or injury occurred to provide said establishment with safeguards as required by this act, or that the failure to provide such safeguard directly contributed to such death or injury.

SEC. 7. Manufacturing establishments, as those words are used in this act, shall mean and include all smelters, oil refineries, cement works, mills of every kind, machine and repair shops, and, in addition to the foregoing, any other kind or character of manufacturing establishment, of any nature or description whatsoever, wherein any natural products or other articles or materials of any kind, in a raw or unfinished or incomplete state or condition, are converted into a new or improved or different form.

SEC. 8. Wherever the expression occurs in this act in substantially the following words: "Every person owning or operating any manufacturing establishment," or where language similar to that is used, the word "person" in that connection shall be held and construed to mean any person or persons, partnership, corporation, receiver, trust, trustee, or any other person or combination of persons, either natural or artificial, by whatever name he or they may be called.

Approved March 11, 1903.

CHAPTER 359.—*Protection of employees as members of the national guard.*

SECTION 1. Sections * * * 28 * * * of chapter 255 of Session Laws of Kansas of 1901 [shall] be amended to read as follows: Section 28. * * * It shall be a misdemeanor for any employer to refuse permission to any employee who is a member of the Kansas national guard to attend drill or annual muster, or perform active service, when so ordered by the commander-in-chief; and any employer who shall so refuse, or shall discharge an employee from his service or shall in any way punish an employee for being absent in the performance of military duty, when so ordered by competent authority, shall on conviction be punished by a fine of not less than five dollars nor more than fifty dollars for each offense.

Approved March 9, 1903.

CHAPTER 377.—*Examination and licensing of plumbers.*

SECTION 1. Any person now or hereafter engaging or working at the business of plumbing in cities of seven thousand population or more in this State, either as master plumber or employing plumber or as a journeyman plumber, shall first receive a certificate thereof in accordance with the provisions of this act.

SEC. 2. Any person desiring to engage in or work at the business of plumbing, either as a master plumber or employing plumber or as a journeyman plumber, in cities having a population of seven thousand or more and a system of water-supply or sewerage, shall make application to a board of examiners hereinafter provided for, and shall at such times and place as said board may designate be compelled to pass such examination as to his qualifications as said board may direct. Said examination may be made in whole or in part in writing and shall be of a practical and elementary character, but sufficiently strict to test the qualifications of the applicant.

SEC. 3. There shall be in every city of seven thousand inhabitants or more a board of examiners of plumbers consisting of three members, one of which shall be chairman of the board of health, who shall be ex officio chairman of said board of examiners; a second member, who shall be a master plumber; and a third member, who shall be a journeyman plumber. Said second and third members shall be appointed by the mayor and approved by the council of said city within three months after the passage of this act, for the term of one year from the 1st day of May in the year of appointment, thereafter annually before the 1st day of May, and shall be paid from the treasury of said city the same as other officers, in such sum as the authorities may designate.

SEC. 4. Said board of examiners shall, as soon as may be after their appointment, meet, and shall then designate the times and places for examination of all applicants desiring to engage in or work at the business of plumbing within their respective jurisdiction. Said board shall examine said applicants as to the practical knowledge of plumbing, house drainage, and plumbing ventilation, and, if satisfied of the competency of such applicants, shall thereupon issue a certificate to such applicant authorizing him to engage in or work at the business of plumbing, either as master plumber or employing plumber or as a journeyman plumber. The fee for a certificate for a master plumber or employing plumber shall be five dollars; for a journeyman plumber, it shall be two dollars. Said certificate shall be valid and have force throughout the State, and all fees received for said certificates shall be paid into the treasury of the city where such certificates are issued.

SEC. 6. All persons who are required by this act to take examinations and procure a certificate as required by this act shall apply to the board in the city where they reside, or to the board nearest their place of residence.

SEC. 7. Any person violating any provision of this act shall be deemed guilty of a misdemeanor, and be subject to a fine of not less than five dollars nor exceeding fifty dollars for each and every violation thereof.

Approved March 9, 1903.

CHAPTER 393.—*Liability of employers for injury to employees—Railroad companies.*

SECTION 1. Section 1 chapter 93 of the Laws of 1874, entitled "An act to define the liability of railroad companies in certain cases," * * * is hereby amended so as to read as follows: Every railroad company organized or doing business in this State shall be liable for all damages done to any employee of said company in consequence of any negligence of its agents, or by any mismanagement of its engineers or other employees, to any person sustaining such damage: *Provided*, That notice in writing of the injury so sustained, stating the time and place thereof, shall have been given by or on behalf of the person injured to such railroad company within ninety days after the occurrence of the accident.

Approved March 4, 1903.

MICHIGAN.

ACTS OF 1903.

ACT No. 87.—*Inspection of factories.*

SECTION 1. Whenever fire escapes, elevator protection or repairs, water-closets and other permanent improvements to buildings are ordered by factory or deputy factory inspectors under the provisions of act one hundred thirteen, session laws of nineteen hundred one, said improvements shall be made by the owner of the building or premises where such improvements are ordered: *Provided*, That nothing in this section shall be construed to interfere with any contract between owner and tenant whereby the tenant agrees to make such improvements when ordered by factory or deputy factory inspectors.

SEC. 2. Whenever the owner of any building or premises, as mentioned in section one of this act, is a nonresident of this State, the tenant shall make such improvements and may deduct the cost thereof from the amount of rent for use of said premises.

Approved May 7, 1903.

ACT No. 106.—*Employment of labor—Contracts involving removal from home locality.*

SECTION 1. Any person, company or corporation, or any agent or officer thereof who shall induce another person, by promise of wages or other valuable consideration, to agree to work for the person, company or corporation in whose behalf the offer of inducements is made, at a point away from his or her home locality, shall specify in writing the terms and conditions under which the said work is to be performed, the rate of wages and how, when and where said wages are agreed to be paid, and may furnish a copy of such statement of agreement to the person so induced by the promises therein to agree to work for the person, company or corporation offering said inducements: *Provided*, That it shall be unlawful for any person to make a tender of inducement to go away from the home locality to work, to any child under sixteen years of age unless the written consent of the parents of such child has been first obtained, as well as the consent of the truant officer or county agent of the board of corrections and charities for the locality where said child belongs; and in case such consent is obtained and the child goes abroad under the influence of the inducements so offered, such child under sixteen years of age shall be safely returned to its home at any time when its parents shall request, in writing, such return. Any person or any agent or officer of any corporation who shall, in offering inducements to any person to work for hire at any place apart from his or her home locality, misrepresent any of the conditions of such employment as mentioned above, shall be liable to pay to the person injured by such misrepresentation, the full amount of the damage sustained and shall be further liable to the penalties provided in section three of this act.

SEC. 2. Every person, who, with intent to defraud, shall accept or receive transportation provided by or at the instance or expense of his employer, from any point in this State to or in the direction of the place where he has contracted to perform labor for, or render services to such employer, or who shall knowingly, and with intent to defraud, accept or receive the benefit of any other pecuniary advancements made by or at the instance and cost of his employer, under an agreement on the part of such person to perform labor or render services in repayment of the cost of such transportation or of such other benefits, shall be deemed and adjudged guilty of a misdemeanor if he shall neglect or refuse to render services or perform labor of an equal value to the full amount paid for such transportation or other benefits, or shall neglect or refuse to pay such employer in money the amount paid therefor. The value of the services to be rendered, or labor to be performed shall be determined by the price agreed to be paid therefor by such employer under his contract with the employee. The failure or refusal of any such employee to perform such labor or to render such services in accordance with his contract, or to pay in money the amount paid for such transportation or other benefits, shall be prima facie evidence of his intent to defraud.

SEC. 3. Every person found guilty of violating the provisions of this act shall be punished by a fine not exceeding twenty-five dollars or by imprisonment of not less than ten nor more than sixty days.

Approved May 14, 1903.

LEADING ARTICLES IN PAST NUMBERS OF THE BULLETIN.

- No. 1. Private and public debt in the United States, by George K. Holmes.
Employer and employee under the common law, by V. H. Olmsted and S. D. Fessenden.
- No. 2. The poor colonies of Holland, by J. Howard Gore, Ph. D.
The industrial revolution in Japan, by William Eleroy Curtis.
Notes concerning the money of the U. S. and other countries, by W. C. Hunt.
The wealth and receipts and expenses of the U. S., by W. M. Steuart.
- No. 3. Industrial communities: Coal Mining Co. of Anzin, by W. F. Willoughby.
- No. 4. Industrial communities: Coal Mining Co. of Blanzy, by W. F. Willoughby.
The sweating system, by Henry White.
- No. 5. Convict labor.
Industrial communities: Krupp Iron and Steel Works, by W. F. Willoughby.
- No. 6. Industrial communities: Familistère Society of Guise, by W. F. Willoughby.
Cooperative distribution, by Edward W. Bemis, Ph. D.
- No. 7. Industrial communities: Various communities, by W. F. Willoughby.
Rates of wages paid under public and private contract, by Ethelbert Stewart.
- No. 8. Conciliation and arbitration in the boot and shoe industry, by T. A. Carroll.
Railway relief departments, by Emory R. Johnson, Ph. D.
- No. 9. The padrone system and padrone banks, by John Koren.
The Dutch Society for General Welfare, by J. Howard Gore, Ph. D.
- No. 10. Condition of the Negro in various cities.
Building and loan associations.
- No. 11. Workers at gainful occupations at censuses of 1870, 1880, and 1890, by W. C. Hunt.
Public baths in Europe, by Edward Mussey Hartwell, Ph. D., M. D.
- No. 12. The inspection of factories and workshops in the U. S., by W. F. Willoughby.
Mutual rights and duties of parents and children, guardianship, etc., under the law, by F. J. Stimson.
The municipal or cooperative restaurant of Grenoble, France, by C. O. Ward.
- No. 13. The anthracite mine laborers, by G. O. Virtue, Ph. D.
- No. 14. The Negroes of Farmville, Va.: A social study, by W. E. B. Du Bois, Ph. D.
- No. 15. Incomes, wages, and rents in Montreal, by Herbert Brown Ames, B. A.
- No. 16. Boarding homes and clubs for working women, by Mary S. Fergusson.
The trade-union label, by John Graham Brooks.
- No. 17. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
- No. 18. Brotherhood relief and insurance of railway employees, by E. R. Johnson, Ph. D.
The nations of Antwerp, by J. Howard Gore, Ph. D.
- No. 19. Wages in the United States and Europe, 1870 to 1898.
- No. 20. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
Mutual relief and benefit associations in the printing trade, by W. S. Waudby.
- No. 21. Condition of railway labor in Europe, by Walter E. Weyl, Ph. D.
- No. 22. Pawnbroking in Europe and the United States, by W. R. Patterson, Ph. D.
- No. 23. Benefit features of American trade unions, by Edward W. Bemis, Ph. D.
The Negro in the black belt: Some social sketches, by W. E. B. Du Bois, Ph. D.
Wages in Lyon, France, 1870 to 1896.
- No. 24. Attitude of women's clubs, etc., toward social economics, by Ellen M. Henriotin.
The production of paper and pulp in the U. S. from Jan. 1 to June 30, 1898.
- No. 25. Statistics of cities.
- No. 26. Foreign labor laws: Great Britain and France, by W. F. Willoughby.
- No. 27. Protection of workmen in their employment, by Stephen D. Fessenden.
Foreign labor laws: Belgium and Switzerland, by W. F. Willoughby.
- No. 28. Wholesale prices: 1890 to 1899, by Roland P. Falkner, Ph. D.
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- No. 28. Voluntary conciliation and arbitration in Great Britain, by J. B. McPherson.
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- No. 30. Trend of wages from 1891 to 1900.
Statistics of cities.
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- No. 31. Betterment of industrial conditions, by V. H. Olmsted.
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Condition of railway labor in Italy, by Dr. Luigi Einaudi.
- No. 32. Accidents to labor as regulated by law in the U. S., by W. F. Willoughby.
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The British workmen's compensation act and its operation, by A. M. Low.
- No. 33. Foreign labor laws: Australasia and Canada, by W. F. Willoughby.
The British conspiracy and protection of property act and its operation, by A. M. Low.
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- No. 39. Course of wholesale prices, 1890 to 1901.
- No. 40. Present condition of the hand-working and domestic industries of Germany, by Henry J. Harris, Ph. D.
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- No. 41. Labor conditions in Cuba, by Victor S. Clark, Ph. D.
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- No. 50. Labor unions and British industry, by A. Maurice Low.
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ASSOCIATE EDITORS,
G. W. W. HANGER,
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BULLETIN
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No. 52.

WASHINGTON.

MAY, 1904.

CHILD LABOR IN THE UNITED STATES. (a)

BY HANNAH R. SEWALL, PH. D.

INTRODUCTION.

The object of the present study is to furnish information regarding the subject of child labor. It relates to the employment at labor of children under 16 years of age, their earnings, the hours of labor required of them, and other conditions affecting their well-being owing to the kind of work they do and the sanitary character of the places where they are employed. It also relates to the amount of schooling they have had, and to their health and home conditions. Data for this purpose have been sought mainly from two sources—the employers and the parents of the children. Representative establishments in which children were employed have been visited and replies obtained to questions concerning all under 16 years of age. Interviews have also been had with many children individually, and further information sought concerning them at their homes.

The territory covered has been limited to a comparatively small number of States because of the practical difficulties in the way of canvassing a large number within a reasonable time. Those States were selected which are shown by the reports of the Twelfth Census on manufactures to be employing the largest numbers of children in the

^aIn the preparation of this article the author has had the assistance of Mrs. Edith Parsons, of Des Moines, Iowa, who collected the material used from the States of Illinois, Missouri, Pennsylvania, and Wisconsin. The author desires also to express thanks to the proprietors and the managers of the various establishments which were visited for courtesies shown and assistance given, and to many others who have shown an interest in the work and have helped in various ways, especially to Miss Helen Marot and members of the child labor committee in New York City. The work of tabulation and the preparation of the summary and compilation of laws in connection with this investigation was done by the Bureau of Labor.

industries reported. Twelve States were originally chosen, ranking by numbers of children employed as follows:

NUMBER OF CHILDREN UNDER 16 YEARS OF AGE EMPLOYED IN MANUFACTURES IN TWELVE STATES AT THE TWELFTH CENSUS.

[From the Twelfth Census of the United States.]

State.	Children under 16 years of age.		State.	Children under 16 years of age.	
	Rank.	Number employed in manufactures.		Rank.	Number employed in manufactures.
Pennsylvania.....	1	33,135	New Jersey.....	7	8,042
New York.....	2	13,189	Georgia.....	8	6,373
Massachusetts.....	3	12,556	Maryland.....	9	5,384
Illinois.....	4	10,419	Wisconsin.....	10	5,079
North Carolina.....	5	10,377	Rhode Island.....	11	5,086
South Carolina.....	6	8,560	Missouri.....	12	4,510

The State of Alabama was afterwards added because of the prominent part which it has occupied in recent discussions of the subject of child labor. Very little, however, was done in this State. On an average, 3,474 children were employed in the manufactures of this State during the census year, which caused it to rank 17 according to number of children employed.

The information obtained in regard to child labor in these States is presented in the following pages in two parts, the first dealing with conditions of a general nature found to exist in the establishments visited, and the second with certain facts relating to the children who were individually interviewed and whose homes were visited. Three general tables show the conditions existing in 215 establishments employing 15,857 children. The facts presented in the second part relate to 1,381 children, all of whom were employed at some kind of gainful occupation, and nearly all in the 215 establishments reported in the tables. A child is considered for the purposes of this study to be a person under 16 years of age, and whenever the word is used without qualification it must be understood in this sense.

GENERAL CONDITIONS AFFECTING CHILDREN EMPLOYED AT LABOR.

For the 215 establishments included in the general tables accompanying this article, the number of establishments and of children of each sex employed, by States, were as follows:

ESTABLISHMENTS CANVASSED AND NUMBER OF CHILDREN EMPLOYED, BY STATES.

State.	Estab-lish-ments.	Children under 16 years of age.			State.	Estab-lish-ments.	Children under 16 years of age.		
		Male.	Female.	Total.			Male.	Female.	Total.
Massachusetts.....	18	710	503	1,213	South Carolina.....	9	448	382	830
Rhode Island.....	10	190	205	395	Georgia.....	15	634	596	1,230
New York.....	36	538	637	1,175	Alabama.....	4	102	121	223
New Jersey.....	24	783	434	1,217	Wisconsin.....	6	366	286	654
Pennsylvania.....	45	2,243	2,143	4,386	Illinois.....	14	964	644	1,608
Maryland.....	11	287	551	838	Missouri.....	9	624	389	1,013
North Carolina.....	14	614	461	1,075					
					Total.....	215	8,503	7,354	15,857

The inquiries which were made at these establishments had reference to the ages of the children, their occupations and earnings, and special conditions affecting their well-being while at work. From a few establishments visited valuable information was obtained, which, however, could not be included in the tables because of uncertainty in regard to part of the information and failure to get complete replies to some of the inquiries. Much of this information is presented, however, in the text pages.

AGES.

The laws relating to child labor which have been enacted by nearly all the States show at what ages children can legally be employed at labor in these States. The report of the Twelfth Census upon manufactures shows the number of children under 16 years of age employed at the time the census was taken, and also the number of children employed in 1880, in 1890, and in 1900. Reports showing the number of children employed in establishments subject to inspection are published annually by the factory inspectors of many States. These authorities do not show the ages of the children employed nor do they furnish a satisfactory answer to the question whether all the children employed are in fact above the ages specified by law. The belief exists that in many States children are employed below these ages, and also that in States where no law relating to child labor exists children are employed at a very early age; but there were found no reliable authorities showing the extent to which such laws are evaded or the number of very young children employed in such States. It was a part of the plan of this work to present in tabular form the ages of all the children employed in the establishments visited, but the task of getting correct data as to ages proved to be one of great difficulty, and the instances in which it was found to be practically impossible to obtain such data were so numerous that it seemed best to abandon the plan. Much information, however, was collected which may not be without value, although lacking the precision necessary for a tabular statement.

The laws of Massachusetts require children to be 14 years of age in order to be eligible for employment in manufacturing and mercantile establishments. No child can be employed without an age and schooling certificate. The parent or guardian of a child applying for such certificate must present to the authority issuing the certificate specific evidence of the child's age, such as a duly attested birth certificate, a passport, or a school record. The certificate can not be issued upon the mere oath of the parent. The provisions of the law against the employment of children without certificates are enforced by a large corps of factory inspectors. Children employed without certificates were rarely found in Massachusetts. Of the few that were found

none was under 14 years of age. In one instance a boy of 15 was so large for his age that it had not occurred to his employer to question him. Of the remaining children certificates showed them to be over 14 years of age, but children of foreign parentage were seen in some cotton and worsted factories who were so small that it was impossible not to suspect that they had obtained their certificates upon false evidence. A superintendent in one of these factories declared that, making due allowance for the fact that certain children under him were Italian and should average smaller than Americans, he was convinced either that they had obtained their certificates on false evidence or that they were stunted in their growth.

In Rhode Island, at the time the State was visited for the purposes of this investigation, children were required to be 12 years of age to be eligible for employment in manufacturing and mercantile establishments employing five or more women and children. Children between 12 and 15 years of age could continue in employment only on condition that they attended school at least eighty consecutive school days each year. Children under 16 years of age seeking employment were required to have age certificates, but parents were not required to present specific evidence of age unless the officer issuing the certificate deemed it to be necessary. There was evidence that children under 12 years of age were employed and that children between 12 and 15 years of age were employed without school attendance. In some manufacturing towns the provision for schooling was not sufficient to accommodate all the children of school age, and the proportion of those who attended fell below the average for the State. In these towns the salaries of truant officers were often so small that they could give very little time to the duties of the office, or their interests were opposed to a zealous search for truants. The villages belonging to these towns were largely inhabited by French Canadians and Italians who had come for employment in the mills, many of whom were eager to profit by their children's labor and occasionally succeeded in securing employment for children under 12 years of age. In both cities and villages children of foreign parentage under 15 years of age were allowed to work without school attendance because no suitable provision was made in the schools for teaching them, but many were required to attend night schools.

About 25 per cent of the children employed in the establishments reported for Rhode Island were between 12 and 14 years of age and about 75 per cent between 14 and 16 years of age. Much dissatisfaction was expressed with the school attendance provisions of the law both by persons interested in the schools and by manufacturers. Since the investigation was made this feature has been repealed, and the legal age at which children can be employed has been raised to 13 years.

In New York 14 years is the age under which children can not legally be employed in manufacturing and mercantile establishments during the sessions of the public schools, but children between 12 and 14 years of age can be employed in mercantile establishments during vacations. A few children under 14 years of age were found in factories. One, a large German girl, had been working nearly a year without a certificate. Two small Italian girls had certificates showing them to be over 14 years of age, but the records at the schools they had attended showed them to be less than that age. In several instances where children were apparently over 14 years of age the parents when asked the ages did not state what was shown by the certificates, but a different age, sometimes younger and sometimes older. One girl, 14 years old, was born according to her certificate, only five months after her sister, who was working in the same factory and had taken out her certificate the year before. Certificates were easily obtained in New York for all children who had attended school one year and could read and write simple sentences in the English language; all that was necessary was for the parent of such a child to swear to the place and date of its birth before a notary. During the session of 1903 the legislature altered this provision, so that now, as in Massachusetts, parents must present specific evidence showing the ages of their children.

In New Jersey at the time of this investigation boys could legally work in factories at 12 years of age and girls at 14. Children of both sexes were found under the legal ages. The law provided for school certificates, which were probably intended to be also age certificates, but it did not require manufacturers employing children to keep these certificates on file at their establishments, and it was not done. Very few children had certificates of any sort. Factory inspection was inadequate and infringements of the law were not always discovered. Finally public opinion had been aroused and better officers had been appointed in some districts who were conscientiously enforcing the provisions relating to the employment of children. A few prosecutions had occurred and convictions had been secured in some of the cases, the effect of which was to cause many manufacturers to inquire more closely into the ages of the young people in their employ. About 1 per cent of the children employed in the establishments reported were under 12 years of age, about 20 per cent were between 12 and 14 years of age, and about 79 per cent were between 14 and 16 years of age. Between 3 and 4 per cent of the girls were under 14 years of age. Most of the boys under 14 were employed in the glass factories. Since these establishments in New Jersey were visited the legal age for boys has been raised to 14 years.

In Pennsylvania 13 is the minimum age at which children can legally be employed in manufacturing and mercantile industries. The law requires age certificates for all children under 16 years of age to be kept

children upon false representations. Upon one occasion a parent, wishing to obtain employment for his son in a mine, obtained a certificate for an older boy who had passed his sixteenth birthday, and taking him to the superintendent, when applying for the work, secured the position. The younger boy who was under the legal age was afterwards substituted, and worked for some time before the fraud was discovered.

In Missouri children under 14 years of age can not legally be employed in manufacturing establishments, although no age certificates are required. Under circumstances implying extreme poverty inspectors granted permits to children under 14 years of age, enabling them to obtain employment. In many instances parents were not averse to having their children under legal age declare themselves to be 14 years of age, and depend upon their ability to avoid the eye of the inspector and thus to escape detection. Between 7 and 8 per cent of the children employed in the establishments reported were under 14 years of age.

EARNINGS AND OCCUPATIONS.

The earnings and occupations of children are given in Tables I and II, by States and industries. In selecting industries and establishments for investigation the object in view was to present both the variety of conditions and the number of children subject to them in each State. Thus more industries are reported for some States than for others, and industries employing a large number of children are represented by more establishments than are those employing a small number. By referring to Table I (page 541) it will be seen that 10 industries are reported for Massachusetts and that they are represented by 18 establishments, in which 1,213 children were employed, and that one of these industries—the manufacture of cotton goods—is represented by 7 establishments in which 504 children were employed, or 42 per cent of the whole number of children employed in all the establishments reported, or 43 per cent of the whole number in the manufacturing establishments only. Since, according to the figures reported by the Twelfth Census, 48 per cent of the children under 16 years of age employed in the manufacturing establishments of the State during the census year were employed in the manufacture of cotton goods, the numbers reported in Table I are fairly representative. Only one industry—the cotton manufacturing industry—is reported in the table for South Carolina, but according to the census figures nearly 95 per cent of the children employed in manufactures in the State were employed in this industry.

Textile industries, especially cotton, worsted, linen, and silk goods, use much child labor, but the proportion of children to the total number of persons employed is greater in some States and sections of the

country than in others. Textile industries are represented in Table I by establishments in which the manufacture of yarn, thread, cloth, and carpets is carried on. The establishments which are reported for the Eastern, Middle, and Southern States fairly represent the practice of manufacturers in these States in regard to the use of child labor in textile industries. This practice is more definitely indicated by the following table relating to textile establishments, which is drawn from Table I, and which shows the total number of persons employed at the time the establishments were visited and the number and per cent of children under 16 years of age employed at that time:

NUMBER AND PER CENT OF CHILDREN UNDER 16 YEARS OF AGE EMPLOYED IN TEXTILE ESTABLISHMENTS, BY STATES.

State and industry.	Estab-lish-ments.	Total per-sons em-ployed.	Children under 16 years of age.	
			Number.	Per cent.
MASSACHUSETTS.				
Carpets	1	2,178	142	6.5
Cotton and worsted goods	1	5,002	348	7.0
Cotton goods	7	8,705	504	5.8
Woolen goods	2	786	13	1.7
Worsted goods	1	912	80	8.8
Total	12	17,583	1,067	6.2
RHODE ISLAND.				
Cotton goods	2	1,645	106	6.4
Cotton goods, narrow fabrics	1	660	39	5.9
Hosiery and knit goods	1	515	40	7.8
Worsted yarns	1	417	69	16.5
Total	5	3,237	254	6.0
NEW YORK.				
Carpets, jute	1	551	51	9.3
Cotton goods	2	3,120	129	4.1
Cordage, twine, etc	1	650	20	3.1
Knit goods	2	643	23	3.6
Total	6	4,964	223	4.5
NEW JERSEY.				
Cotton thread	1	1,932	175	9.1
Linen thread, twine, and yarns	1	705	126	17.9
Silk goods, broad	2	716	15	2.1
Silk goods, broad, and ribbon	1	800	77	9.6
Silk goods, thrown	3	345	64	18.6
Total	8	4,498	457	10.2
PENNSYLVANIA.				
Cotton and woolen goods	2	860	68	7.9
Hosiery	1	422	121	28.7
Silk goods, thrown	3	647	145	22.4
Silk goods, thrown and broad	2	1,924	594	30.9
Woolen and worsted goods	1	1,559	118	7.6
Woolen and worsted yarns	2	513	114	22.2
Total	11	5,925	1,160	19.6
MARYLAND.				
Cotton duck, twine, and rope	2	690	117	17.0
NORTH CAROLINA.				
Cotton goods	5	1,277	288	22.6
Cotton yarns	3	421	121	28.7
Cordage, yarn, etc	1	75	16	21.3
Total	9	1,773	425	24.0

NUMBER AND PER CENT OF CHILDREN UNDER 16 YEARS OF AGE EMPLOYED IN
TEXTILE ESTABLISHMENTS, BY STATES—Concluded.

State and industry.	Estab-lish-ments.	Total per-sons em-ployed.	Children under 16 years of age.	
			Number.	Per cent.
SOUTH CAROLINA.				
Cotton goods.....	8	3,908	799	20.4
Cotton yarns.....	1	99	81	51.3
Total.....	9	4,007	880	20.7
GEORGIA.				
Cotton and woolen goods.....	1	350	27	7.7
Cotton goods.....	9	a 5,330	a 968	a 18.2
Cotton goods, bags, and bleaching.....	1	b 1,047	b 191	b 18.2
Cotton yarns.....	1	126	7	5.6
Total.....	12	6,853	1,193	17.4
ALABAMA.				
Cotton goods.....	1	385	113	29.4
Cotton yarns.....	2	283	77	27.2
Knit goods.....	1	150	83	22.0
Total.....	4	818	223	27.2

a Not including 6 children employed Saturdays and holidays.

b Not including 11 children employed after school hours and a half day Saturdays.

It appears from this table that the percentages average larger in the Southern States than in the Middle States, and larger in the Middle States, except in New York, than in the Eastern States. A smaller percentage is shown for Georgia than for the other Southern States. This is no doubt due to the restrictions upon the employment of children which the manufacturers of this State have been voluntarily enforcing against themselves for the past two years. The voluntary restriction which has also existed in South Carolina has not been so general as in Georgia.

Similar percentages might be given for all the establishments reported in Table I, but the information would be of little value; indeed, in many cases it would be misleading, for, except in textiles, an industry in many instances is not represented by more than one establishment in a State. In such cases the establishment reporting can not be relied upon to indicate accurately the practice of manufacturers generally in the State in regard to the relative number of children employed in the industry which it represents.

The department stores in large cities perhaps stand next to textile industries in the employment of child labor. Modern inventions, such as cash carriers and pneumatic tubes, may diminish the relative demand for child labor, but as the industry develops, as establishments increase in size and comprehensiveness, and as the labor in them becomes more and more subdivided, there is no limit to the absolute demand for little people to run errands, carry messages, and generally engage in the minor services connected with waiting on customers. Department stores are reported for Massachusetts, Rhode Island, New York, Pennsylvania, Maryland, Wisconsin, Illinois, and Missouri. Effort was

made to represent all conditions. Establishments 43 and 44 in New York were stores on the east side in New York City. The number of children employed was small, but the percentages were larger in these stores than in any others reported. They were 30 and 25 per cent, respectively. Six stores, namely, establishments 20, 109, 190, 196, 211, and 212, contained from 10 to 16 per cent; the remaining stores contained from 3 to 9 per cent of children. With one exception each way the stores in which more than 10 per cent of the employees were children, kept longer hours than those in which the number of children employed was less than 10 per cent of the whole number of employees. The exceptions are establishments 109 and 110. The first, which had a percentage of children of 16 per cent, had a shorter working day and week than many which had a percentage of children of less than 10 per cent. The second, which had a percentage of children of 7 per cent, had a longer working day and week than most of those which had a percentage of children of more than 10 per cent. By referring to Table I, it will be seen that establishment 20, in Rhode Island, employed on Saturdays a large number of children in addition to its regular force. These children were between 12 and 16 years of age; they worked at the store from 8 a. m. to 10.30 p. m., and attended school the other five days of the week. Other stores were found to be employing an extra force on Saturdays, including many children, but in no other case was it possible to get the exact number employed on a particular day. Establishments 43 and 44, cited above, employed an extra force, Saturday afternoons and evenings, of from 10 to 20 children.

Some establishments which were visited are not reported in the table because complete information could not be obtained. Among these are establishments representing the canning industry in Maryland. The children who find work in these establishments during the packing season may be divided into two classes, as follows: (1) Time workers, whose occupations, such as filling cans, carrying cans, pasting on labels, etc., are connected with canning the goods and getting the cans ready for market; and (2) piece workers whose occupations are all in connection with preparing the goods for canning. In the establishments visited there were employed from 8 to 20 children of the first class. They were all over 12 years of age, and most of them were over 14 years of age. The number of children of the second class fluctuated from day to day. It depended upon the amount of child labor required to attend to the fruit or vegetable on hand. Large numbers found employment during the strawberry season, because the labor of hulling and picking over the berries can easily be performed by quite small children. Children no older than 5 years were allowed to work. Very young children were also allowed to help in preparing peaches and string beans. But in preparing pineapples

there was not much that they could do. Strictly, these children were not employed by the company; they helped their mothers, older sisters, or friends. The managers of the companies were usually unwilling to admit young children unless they were accompanied by older persons and then only when there was work which they could do; but a mother could often get her small boy or girl in at meal times, when lunches were brought from home, and keep the child several hours before discovered. If there was nothing else the child could do he could help his mother by fetching and carrying for her. The regular hours of labor in these packing houses were ten hours a day, but the actual time worked depended upon the amount and kind of goods on hand. The work often did not require the full day, but when a large lot of perishable goods was on hand it continued many hours into the night.

The children found in the cotton factories in the Southern States were white children, except a very few in two establishments, but colored children were found employed in tobacco factories. Of the children employed in establishment 158 in North Carolina, 429 were colored. Most of them were stemmers, but a large proportion of the weighers and about one-half of the taggers were colored boys. The stemmers were piece workers, employed and paid by their relatives or friends whom they helped. They were mostly over 10 years of age, the majority were over 12, but children 6 or 7 years old were seen standing by their mothers doing the same work. Many of these children expected to leave off work at Christmas time, which would be in a few weeks, and go to school. In establishment 213 in Missouri, also a tobacco factory, 30 colored boys were employed as sweepers and rackers. They all claimed to be over 14 years of age. The colored children found in cotton factories were 2 boys in establishment 161, employed, one as a sweeper, the other as a waste picker; and 7 boys in establishment 178 employed in the bleachery.

The earnings of children employed in the establishments reported are given in Table I in two ways—by showing the highest, lowest, and average earnings per week for each establishment, and by giving the numbers employed in each establishment earning specified amounts. The latter is of value as showing more accurately than can be done by averages the condition of the children as to wages. The information given in the table is drawn from the weekly earnings of each child on full time. In the case of piece workers full-time weekly earnings were estimated by considering the time actually worked and the amount earned during that time. This was possible in most cases, but in some establishments no records were kept of the time of piece workers, and their employers were unable to give needed facts. These piece workers are included in the numbers employed in these establishments, but their earnings are not included in the information relative to the earnings

of the children employed, and their numbers are deducted from the whole number employed in calculating average earnings. The most important cases of piece workers omitted in this way are 250 children employed in establishment 90, 54 in establishment 114, 305 in establishment 158, and 52 in establishment 213. The piece workers excluded in establishment 90, a cigar factory, were cigar rollers and bunch makers. A majority of them were earning between \$3 and \$4 a week. It is probable that had their earnings been included the average earnings for the establishment would have been represented by a higher figure than that reported. In establishment 114, which manufactured hosiery, at least 35 of the 54 piece workers excluded were earning more than \$4 a week; 19 of these were earning over \$5 a week. Had their earnings been included the average for the establishment would have been higher, but it would not have been much, if any, over \$4. In establishment 158, which manufactured tobacco, the piece workers excluded were stemmers; they were colored children and, although their time was much broken, they were said to average about \$2.40 per week. Their earnings would probably have lowered the average reported for that establishment. In establishment 213, which also manufactured tobacco, the piece workers excluded were white girls employed as wrapper stemmers, and their earnings, averaging between \$5 and \$6 a week, would probably have raised slightly the average reported for the establishment.

It was originally intended to give the earnings of the children by occupations, but the plan was abandoned because in many of the industries considered very few were employed at what could be termed skilled labor; also, many were not confined to a single definite occupation, but might be set at several different tasks in the course of a week. The occupations at which children were employed in the establishments reported are given separately in Table II (pages 546-554). By looking up in this table any establishment reported in Table I a general idea can be gained as to the manner in which the labor of the children was utilized. The occupations are classified according to the sex of the children; also the important occupations, those at which a greater number of children were employed, are indicated by italics; and those at which only one child was found employed are shown in the singular number.

By reference again to Table I it will be seen that the difference shown between the highest and lowest earnings of children in many establishments is considerable. This is especially true of the textile industry. In establishments representing this industry, not only were different occupations paid at different rates, but there was great diversity in the earnings of children in the same occupation. Thus in a cotton factory in Massachusetts 14 weavers averaged from \$3.45 to \$10.90 during the week considered; 12 spinners averaged from \$2.28

to \$7.30 during the same time. In a cotton factory in South Carolina 5 weavers averaged from \$3.60 to \$5.76, and 45 spinners averaged from 90 cents to \$5.29. Similar differences were found in some of the occupations in other industries. They usually occurred wherever work was paid for by the piece. In all piecework the rate was the same for children as for adults. The wages paid children in department stores were, as a rule, lower than those paid in manufacturing establishments in the same State, but the hours of labor for all employees were less.

The condition of children in each State as to earning capacity is further shown in the last eight columns of Table I, which gives for each establishment the number of children for whom earnings were reported, classified according to weekly earnings. The following table drawn from this part of Table I summarizes the condition in each State, and for the 13 States. The earnings are divided into three classes instead of eight as in Table I, namely, earnings under \$3; \$3 or under \$4; \$4 or over; and in addition to the numbers the percentages of children in each class are given so that their condition in each State may be more readily perceived.

CLASSIFIED WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

States.	Establishments.	Children.	Number of children under 16 years of age earning—			Per cent of children under 16 years of age earning—		
			Under \$3.	\$3 or under \$4.	\$4 or over.	Under \$3.	\$3 or under \$4.	\$4 or over.
Massachusetts.....	18	1,213	98	335	780	8.1	27.6	64.3
Rhode Island.....	10	395	76	180	139	19.2	45.6	35.2
New York.....	36	1,175	184	713	278	15.6	60.7	23.7
New Jersey.....	24	1,214	229	783	252	18.9	60.4	20.7
Pennsylvania.....	45	4,033	1,006	1,486	1,541	24.9	36.9	38.2
Maryland.....	11	824	583	161	77	70.8	19.9	8.3
North Carolina.....	14	770	439	265	66	57.0	34.4	8.6
South Carolina.....	9	829	519	235	45	66.2	28.4	5.4
Georgia.....	15	1,218	626	456	136	51.4	37.4	11.2
Alabama.....	4	223	177	41	5	79.4	18.4	2.2
Wisconsin.....	6	654	118	222	314	18.0	34.0	48.0
Illinois.....	14	1,604	366	521	717	22.8	32.5	44.7
Missouri.....	9	950	158	460	341	16.5	48.0	35.5
Total.....	215	15,111	4,609	5,811	4,691	30.5	38.5	31.0

Earnings were reported for 15,111 children in 215 establishments in 13 States. Of this number 30.5 per cent were earning less than \$3 a week, 38.5 per cent were earning \$3 but under \$4 a week, 31 per cent were earning \$4 or over a week. The earnings of the largest number were \$3 or under \$4 a week. In Massachusetts alone more than 50 per cent of the children reported earned \$4 or over, while in Maryland, North Carolina, South Carolina, Georgia, and Alabama more than 50 per cent of the children earned less than \$3. In the remaining States less than 50 per cent earned under \$3, and less than 50 per cent earned over \$4, but only in New York and New Jersey did more than 50 per cent earn between \$3 and \$4 a week. The

earnings of the children were least in those States in which there was little or no limitation placed upon their employment. But it does not necessarily follow that the smaller earnings in those States were due to the fact that younger children were employed; the two circumstances may have a common cause in general industrial conditions.

HOURS OF LABOR.

The data in regard to the hours of labor of children are given in Table III (pages 554-558.) Since the working day is usually the same for all classes even in States where the maximum hours for women and children are fixed by law, the regular working hours of the establishments reported are given in the table, and a few exceptions applying to children added in footnotes. The daily hours from Monday to Friday, inclusive, the hours for Saturday, and the whole number of hours per week are given in separate columns. The table also shows the length of noon intermissions and those establishments which require overtime work of children. The hours for night work in such establishments as use a regular night force are given in footnotes.

The facts which appear most prominent in this table are the lack of uniformity in regard both to working time and to intermissions, and the greater number of hours in the Southern textile factories as compared with factories of any kind in the Northern and Western States. The usual hours of labor per week in textile manufacturing establishments were 58 in Massachusetts, 60 in Rhode Island, New York, Pennsylvania, and Maryland; 55 in New Jersey, and 66 in North Carolina, South Carolina, and Georgia, while in Alabama they were more than 66 in two establishments. Southern manufacturers claim that in a warm climate more hours are required to accomplish the same production than in a cold climate. The temperament of Southern working people is said to be less energetic than that of their Northern competitors, a fact which manifests itself in much broken time. Employers complain that it is necessary to employ a large number of spare hands in order to keep the work going. Much broken time appeared in the time records of children in many Southern factories. Some parents admitted that their children did not like to work all the time, while denying that they were ill or tired. Others complained that their children were not allowed to work the full time; that more children were employed than could be given work, so a few were selected each day to be sent home. One superintendent stated that the children he employed usually worked full time except when sent home "to rest." But children seldom lost by broken time enough to reduce their hours of labor below 60 per week, rarely so much as that, except for actual sickness. Some occupations of children did not require continuous labor. An example of this was the doffers in cotton factories who often had several hours a day when they would not be

actively at work. Sometimes they were allowed to spend their waiting time in the mill yard at play; this was seen in the South. Sometimes when the waiting time occurred near the end of a morning or afternoon they were sent home.

In Rhode Island and New York the number of hours during which children can be employed has been reduced by law since the facts given in the table were collected, except those relating to ten establishments in New York. In Rhode Island the number of hours has been reduced from 60 per week to 58 for children under 16 years of age. In New York under the old law children under 16 years of age could be employed 10 hours a day and 60 per week. The new law retains this time for persons under 18 and women under 21, but prohibits the labor of children under 16 more than 9 hours a day and 54 hours a week. In practice when an establishment runs more than 10 hours a day for five days for the purpose of shortening one day, as is often the case, the hours per week of children under 16 are reduced below 54 hours. Facts were collected from ten establishments in New York after this provision went into effect, but all were not enforcing it. In a few instances the establishments were not running full time, and in one establishment the ages of the children approached so near to 16 years that permission had been given to continue their employment on the old basis. Managers asserted that on account of the inconvenience of enforcing the 9-hour law they intended in the future to employ no children under 16 years of age.

Textile manufacturing establishments usually run the full number of hours per week allowed by law, other factories often run less time. In New Jersey, however, where the hours fixed by law are less than in any other State comprehended in this study, the legal number, 55 per week, was in force in the textile establishments reported, but some of the establishments representing other industries were keeping longer hours.

The custom of giving a half holiday on Saturdays or closing earlier in the afternoon on that day than on other days generally prevailed in textile manufacturing establishments. But the vacation on Saturdays was usually earned by longer hours the rest of the week. Thus children earned their half holiday on Saturday by working 10½ hours each of the other five days in Massachusetts, 10½ hours in Rhode Island, 12½ hours in one establishment in Alabama, and 12 hours in South Carolina. Many manufacturing establishments in New York City and elsewhere gave a half holiday on Saturday during the summer months only. The time allowed for noon intermissions was usually about the same in textile manufacturing establishments in the same State, but it differed in different parts of the country. In the establishments reported for Massachusetts, New York, and New Jersey it was 1 hour. In all but one of those reported for Rhode

Island it was 45 minutes; in those reported for Pennsylvania, Maryland, North Carolina, South Carolina, Georgia, and Alabama it was usually 30 minutes, or not more than 45 minutes. In other manufacturing establishments the time varied even in the same State.

The regular working time of mercantile establishments varied both as to numbers and distribution of hours. Department stores doing a large popular business maintained long hours on Saturday, keeping open until 9 or 10 p. m., or even later. The children employed in these establishments were usually required to remain until closing time, but they were permitted to come an hour or more late on certain mornings, so that the total hours for the week would come within legal limitations. Nearly all the department stores reported gave a half holiday one day in the week during the summer months. Complete information was not obtained on this point. Most of those stores not keeping open late on Saturday gave a summer half holiday on Saturday, one of those keeping late hours on Saturday gave a summer half holiday on Friday, viz, establishment 20 in Rhode Island, and one of those keeping late hours on Saturday gave its summer half holiday on Saturday, viz, establishment 139 in Maryland. Nearly all the department stores kept open overtime during the holiday seasons. In some establishments the children who were kept late one evening were allowed to come from two to three hours late the next morning. It was usual in department stores to allow the employees one hour for their noonday meal, but not the same hour for all. An intermission for supper, usually 30 minutes, was allowed on Saturdays by stores keeping open two or more hours after 6 p. m., and during the holiday seasons on any day by stores keeping open two or more hours overtime.

Table III shows the establishments in which children were required to work overtime during the past year. This overtime labor was usually performed after the regular closing hour at night and sometimes during the noon hour. It usually did not involve the whole establishment, and was seldom required of more than a small portion of the children employed. The periods of overtime work were usually short, i. e., not more than three weeks, but a few instances of 10 and 12 weeks were found. The number of extra hours per day varied from 1 to 3. The number of days a week were usually 6 or 3, but often not more than 1. Usually the overtime work did not continue after 7 p. m. But there were instances when the closing hour was not until 8 or 9 p. m. In such cases opportunity to eat a lunch was generally given the children and other employees. Overtime work does not include regular night work, the hours of which, for the establishments which reported night work, are given in the footnotes accompanying Table III.

Regular night work was found to occur only in certain industries. Those reported are glass, steel, silk, and cotton yarns. In the last

two night work was not general except in certain localities. There were two methods of employing night labor, the same persons being employed either exclusively at night or employed alternately at night and during the day in two shifts of a week each in length. The first method was found in practice in establishments manufacturing silk and cotton yarns, and was reported in 1 establishment in Pennsylvania, 4 in North Carolina, 1 in South Carolina, and 1 in Georgia. Night work was found to exist in other textile establishments in Rhode Island, Alabama, and Georgia, for which complete information was not obtained. The second method of employing night labor was found in practice in glass factories and steel works, of which 5 establishments in New Jersey and 5 in Pennsylvania were reported. Children were employed at night in all the establishments for which night work was reported, and in those in which it was known to exist. The hours of night work in 3 cotton factories in North Carolina (in one of these the night work was in the yarn department only), and in 1 in Georgia were 12 each night from Monday to Friday, inclusive, and none on Saturday night, making 60 for the week. The hours at night in a cordage establishment in North Carolina were 12 each night from Monday to Friday, inclusive, and 6 on Saturday night, making 66 for the week. In the cotton factory in South Carolina the hours at night were 11 for six nights, making 66 for the week, but Saturday's work began immediately at the close of the usual noon intermission and ended at midnight. No stated intermission during the night was granted for lunch in any of these factories except in the one in South Carolina, where 15 minutes was given at midnight Monday to Friday, and at 6 p. m. on Saturday. Employees were allowed to take time for eating their lunches, which they brought with them, while the machinery was running and the work going on. The hours of night work at a mill in Georgia which was not reported were $11\frac{1}{4}$ each night for five nights and $3\frac{3}{4}$ on Saturday, making 60 hours in all. On Saturday the night force began work at 1 p. m., immediately after the day force had left the mill, and finished at 4.45 p. m. When night work was begun at this mill, an intermission of one hour was allowed at midnight, and work on Saturday continued until 9.45 p. m., but it was discontinued at the special request of the operatives, who since they were obliged in either case to bring their lunches, preferred to eat them while the work was going on, and have the shorter session on Saturday. Some of the establishments reported from the Southern States which were not running at night had been running at night within a few years, a few within one year, and one establishment for which night work is reported discontinued the night work the week following the investigation. It was claimed by some of the manufacturers that night work was going into disfavor, because it was costlier than day work, since not only the rates of wages were

higher but the production was relatively less. But a great deal of night work remains, especially in small yarn mills.

The glass factories and steel mills reporting night work followed the method of alternating day and night shifts of a week each. The night week in the 5 glass bottle factories reported in New Jersey, and the 1 in Pennsylvania, included only 5 nights, no work being done Saturday night. The hours of labor in the New Jersey factories for day work extended from 7 a. m. to 5 p. m. every day, for night work from 5 and 5.15 p. m. to 2, 2.15, 2.30 and 3 a. m. for 5 nights in the week. Two intermissions of from 15 to 30 minutes in length were given during the night in all but one establishment, not merely for lunch, but to allow a general relaxation after the incessant toil at the furnaces. Similar intermissions were given during the day in addition to the dinner hour; they usually occurred in both the forenoon and afternoon about midway of the session. The time of these intermissions is not included in the working time of these establishments as reported in the table. These glass factories do not continue in operation the entire year, but only during the time of a "blast" or "fire," which lasts as a rule from September 1 to June 30. The hours of labor for night work, it will be noticed, conclude at a very early hour in the morning. The boys are often afraid to go home at this time and remain until daybreak in the factory, sleeping on the floor. The glass factories visited in Maryland and reported in the table represent the same branch of the industry as the New Jersey factories—the manufacture of bottles—but they were running without night work. They were using pot furnaces instead of the continuous tank furnaces in use in New Jersey. The latter, which are said to be rapidly superseding the former in this industry, require night work. Thus the demand for the night labor of boys, whose assistance at the furnaces seems to be indispensable, appears to be increasing. The hours of labor at night in the steel works and rolling mills connected with establishments 128, 129, and 130 were 11½ each night for 6 nights, or 69 hours a week; they began at 6 p. m. and ended at 5.55 a. m., with an intermission of 25 minutes for lunch at some time during the night. The night shift began Sunday evening at 6 and the week's work ended at 5.55 the following Saturday morning. These hours are longer than the hours reported for any other establishment, night or day. But the work of the boys is not continuous, it being claimed that they are not employed more than 40 minutes in each hour. In these establishments, and also in the glass factories, there is more or less irregular overtime work done by children. The night force may be short a few boys when it begins work, and boys who have just finished day work are often kept a part of the night to take the places of the absent ones. Or ambitious boys will be allowed to remain during a part of an incoming shift if there is work they can do.

Certain offices representing the telegraph and messenger service were visited in New York City and in Philadelphia. They are not reported in the table, but information was obtained concerning the ages and hours of labor of the messengers. Fully one-fourth were boys under 16 years of age, of whom more than one-third in the Philadelphia offices were between 12 and 14 years of age. A small number under 14 was found in the New York offices. The regular time these boys were on duty was 10 hours a day for 6 days, and 12 hours every other Sunday. Some offices did not require Sunday duty, and one office in the financial district of New York City was open only 9 hours a day, but the boys it employed usually went up town and served during the evening in other offices. Although the boys were expected to be on duty 10 hours a day, they did not all serve at the same time. The messengers in any one office were divided into groups, each group beginning and ending work at times so arranged that a certain number would be on hand as long as the office remained open. Some offices were open the entire 24 hours, others not more than 18 hours. Older boys were usually selected for night work, but boys under 16 years of age were often on duty after 9 p. m. Boys often remained on duty more than 10 hours. The overplus was considered overtime and paid for with an additional allowance of 15 cents for supper money for boys kept after 9 p. m.

CERTAIN OTHER CONDITIONS AFFECTING CHILDREN.

There are many conditions which affect the well-being of working children besides the hours of labor. Some of these are the sanitary condition of the buildings in which they work, the demands of the particular occupations which form their daily tasks, and the character of associates with whom they are thrown.

With a few exceptions large establishments were found to be better equipped with arrangements to preserve the health and secure the comfort of operatives than small ones. The workrooms were larger and higher, and furnished with larger and more numerous windows. Many of the buildings were equipped with excellent systems of ventilation, and the air within their walls seemed fresh and wholesome. Electricity was universally used in all large new buildings, and was rapidly being introduced into the old buildings belonging to large establishments. Most of the cotton-manufacturing establishments reported from the Southern States were handsome new buildings, well ventilated and lighted. Many of them were built where an abundance of fresh air could be secured at all seasons of the year. They were situated on high ground on the outskirts of a town or quite in the country, with woods near at hand. The factory laws in other States aim to secure a certain level of excellence in sanitary arrangements, which was found to be generally realized in the establishments

visited, and surpassed in many new buildings. But while it may truly be said that an ever-increasing number of working people of all ages are performing their labor in surroundings far better than was considered good enough a few years ago, there are still many, including children, who are working in places which are neither wholesome nor safe. Even in the South, where so much is new, there were many old mills, survivals from the beginning of the cotton industry, when cheap construction and old machinery were thought to be economical. Some of these mills were situated on low ground in the most crowded parts of the towns. Many long-established industries in other parts of the country were housed in old, insanitary buildings which were permitted to remain without alteration because of the expense required to bring them up to modern standards. Private residences in large cities, and other buildings not originally intended for manufacturing purposes, had been turned into small factories with little or no alteration to adapt them to their new uses. In many such places children were found employed.

The safety of buildings depends in part upon the ease and quickness with which employees can escape from them in case of fire. While most of the buildings of the manufacturing establishments reported appeared to be amply equipped with means for extinguishing fires, many were not provided with outside fire escapes, or those which they had were inadequate. Thus many large buildings had one fire escape only, and this consisted merely of a ladder connecting with a window in each story. This ladder was usually of iron, but that on one large building in which many children were working was of wood. Many large buildings which had no outside fire escapes were equipped with broad inside stairways built in halls separated by thick walls of stone or brick from the rest of the building. This construction, which was considered to answer all the purposes of outside fire escapes, prevailed in the South, and was also found in Pennsylvania and other States. The location of fire escapes in some establishments was indicated by large signs suspended from the ceilings. In some buildings provided with fire escapes the inside stairs were faulty, the steps were worn or narrow, or the ascent steep. A cotton factory in Massachusetts was equipped with a spiral iron stairway, so steep that it was necessary while descending to walk with the greatest care on the outer edge to keep from falling. In a paper box factory in New Jersey a flight of stairs much used by the employees was built against an incline and was little better than a ladder. The wooden steps of a flight of stairs in an iron and steel factory in Pennsylvania were worn round and made slippery with grease. To reach a factory occupying the upper floors of an old building in New York City where six children were employed it was necessary to ascend in almost complete darkness four flights of steep wooden stairs, the steps of which were worn uneven by long usage.

The provisions for the comfort of employees in most of the textile factories reported were rather meager. New buildings were generally equipped with commodious and well-ventilated lavatories, which were also occasionally found in old buildings, having been put in recently, but the closets in the average textile factory were ill-ventilated affairs which often opened directly from the workrooms and, although separate for the sexes, were built side by side, with adjoining entrances. Effort was usually made to keep them clean (in some mills they were scrubbed daily), but the parts of the room near the closets were seldom free from an offensive odor. Washing facilities in the average textile factory consisted of one or two sinks placed in the workroom or in the alcove adjoining the closets. No towels were provided. Dressing rooms were found in some establishments, but as a rule none were provided. The outside wraps and street clothing of the operatives hung upon hooks placed between the windows in the workrooms. Except in two silk mills no lunch rooms were provided in any of the textile factories. Those who carried their dinners, or had them brought to them, ate wherever convenient, often sitting on the floor. The seats provided, usually stools or waste boxes covered over that they might be used as stools, or rude benches, were too few to accommodate all who might want to use them during the noon hour. In a few spinning rooms where women were employed boxes of geraniums and other flowering plants occupied the sills of sunny windows. As a rule the workroom of the average textile factory was not an attractive place in which to spend ten or eleven hours a day. The bare walls were often stained and grimy and the floors covered with the rubbish of work. But the operator working in the midst of a forest of machines, his ears filled with their incessant din, probably cares little for the appearance of walls or floor. Occasionally a mill was delightfully clean. Pains was taken to have the sweeping well done, women were employed to scrub halls and closets, the stains of tobacco juice were carefully removed from the walls, which were kept spotlessly white, and the rooms were large and not overcrowded with machinery. In such a mill the atmosphere on a hot day seemed cool and refreshing to one entering from the scorching sunshine.

In the factories connected with the garment industry, and in the cigar factories, department stores, and other establishments where large numbers of women and girls are employed, dressing rooms and lunch rooms are usually provided, in addition to the necessary toilet rooms and closets. In some cases the character of the accommodations was found to be excellent, but more often much is left to be desired. In many factories dressing rooms were found consisting of tiny closets, or merely a corner curtained off from the workroom, in others large rooms filled with lockers and sometimes having an attendant in charge of wraps were found. Some department stores and factories were provided with rest

rooms for the women and girls, and a trained nurse stood ready to care for any taken suddenly ill while at work. In some lunch rooms hot drinks and sandwiches were sold to the employees at low prices. Frequently the same apartment served for both lunch room and dressing room. Outside wraps were hung upon the walls, while the space in the center was occupied by a long table, uncovered, with benches on either side, where the women and girls sat and ate the dinners they had brought with them from home. In most of the cigar and tobacco factories reported lunch rooms were provided, but in one establishment not only were there no lunch rooms but employees were forbidden to eat in the workrooms, in many of which signs to this effect were posted. At the noon hour most of the employees, who were colored people, were sent out of the building and the doors locked. They made the best of the situation, and groups of men, women, and children were to be seen sitting on the bare ground with their backs against the brick walls of the building eating their simple lunches. The building was in the center of a town; there was no grass in the neighborhood, or even shade. Those not occupying the ground congregated in near-by saloons and restaurants.

Many of the conditions affecting the comfort and health of working people, especially children, were due to the nature of the industry in which they were employed and to the demands of their occupations. Such conditions were the dust which comes from the materials used in production, excessive heat or cold incidental to production, contact with poisons, continuous standing required by the nature of the work, and operating dangerous machinery. Injurious dust occurs in a variety of forms in many industries. In the manufacture of cotton a fine lint is constantly separating from the fiber and filling the air. In picker rooms, where the formation of this lint is greatest, dust boxes connected with exhaust fans are usually provided for carrying it off. A strong draft in some halls acts to draw off the lint from other rooms. In many factories, upon entering the spinning room, where most of the children were employed, the presence of lint in the atmosphere was not at once perceived, but evidence of it was soon discovered in the rolls of cotton on the floor, in the piles in corners, and in the fine dust collecting on the machinery. The girls who were attending the spinning frames were constantly wiping the upper parts of the machines with pieces of cloth or brushes; sometimes boys went through the aisles flapping cloths in such a way that the dust collected on the under parts of the frames was blown off. The frames may have been cleaned by this method, but the dust removed was sent where it could easily find its way into the throats and lungs of the young cleaners. Boys were usually employed to sweep out the rolls of waste collecting under the frames and in other parts of the rooms. They were often seen performing this task in a manner which would shock the most

indifferent and untidy of housekeepers. The broom was wielded with as much of an upward fling as possible so that much of the dust and rubbish was thrown into the air to fall again upon frames and floor. Occasionally a boy, tired of the monotony of the mill and needing exercise, would swing his broom in a great circle, sweeping the floor at its lowest point and thus pass up and down the aisles, enveloping himself and the girls at the frames in clouds of dust. Although sweeping is in reality a difficult task to do well, in the South it was usually given to the youngest boys, and the appearance of the rooms bore witness to the slovenly manner in which it was performed. In some mills colored women were employed for this work, with results which could not have failed to be more satisfactory both to employer and operatives. The dust was always apparent in the atmosphere of carding rooms and in most weaving rooms. The humidifiers, used to moisten the atmosphere by throwing out an exceedingly fine spray of water, helped to lay the dust, but they were not always in operation. New mills were usually better equipped for protection against an injurious quantity of lint in the atmosphere than old ones, but in one large mill in a Southern State, built within the last ten years and claimed to be equipped with the latest improvements, in which over 250 children were employed, the quantity of dust in the atmosphere in spinning and carding rooms was unusually great. Work was going on rapidly and everybody was busy. The rooms were crowded with machinery and the air was close and heavy, although many of the windows were open. The manager accounted for the dust on the ground of the large production in progress. Quantities of lint are created in the manufacture of flax and hemp, especially in the process called hackling. In one establishment visited 35 boys were found feeding hackling machines. They were standing in a cloud of dust, bathed in perspiration, and were so hoarse that it was almost impossible to understand them when they spoke. In factories manufacturing wadding for use in the garment trade there was much lint in the carding rooms, also in rooms where the pads were trimmed.

The atmosphere in bottle factories was full of fine particles of glass. In factories where furniture and wooden boxes were manufactured there was much dust from the material used. In a cork factory dust was produced by the process of tapering. Much of it was removed by mechanical means, but enough remained to settle in a fine powder on everything in the room. In a soap factory there was much dust from the soap in the cutting room. In another, where a washing powder was made, 21 boys engaged in filling boxes with the material were working in a cloud of dust. Their eyelids were inflamed and many of them had handkerchiefs or rags tied over their mouths.

The boys employed as slate pickers in the breakers connected with the anthracite coal mines in Pennsylvania were working in the midst

of quantities of coal dust. These breakers are lofty structures of wood and iron, about 100 feet high, in which the coal is crushed and prepared for market. The coal is hoisted in cars from the mine to the top of the breaker where it is dumped into a crusher from which it passes downward over a slide into the pockets below. In its downward passage the coal is inspected by boys and men who sit on boards placed across the slides, and bending over pick out the slate. In the breakers visited much of the dust caused by the crushers is drawn off by fans, but in bad weather, when the atmosphere is damp, so much remains that the space about the pickers is darkened by it, and those nearest the crushers are obliged to use miners' lamps in order to do their work.

A few of the factories visited were equipped with plants which not only heat the atmosphere in winter but cool it in summer. Electric fans also were occasionally seen in workrooms. As a rule, however, the temperature in warm weather was what nature and the incidents of the industry made it. Rooms were often too warm or too cold, owing to the requirements of the work done in them. The air in cotton and worsted mills was always found warm and moist. It was usually overheated in mule spinning rooms and often exceedingly close. The men and boys employed there wore the smallest possible amount of clothing. In bleaching and dyeing establishments boys who were employed to guide the cloth over hot cans and shake the long laps suspended from the rafters in drying rooms worked in an exceedingly high temperature. The tending boys in the glass factories were subjected to the heat of the great furnaces from which the blowers get their supplies of molten glass. Some of these boys were opening and shutting molds for the blowers, others were conveying by means of a tool called a "snap" the hot bottles to the finishers, and others were carrying them to the lehrs or annealing ovens. The mold boys sat directly in front of the furnace openings at the feet of the blowers where the hot blasts of air fell directly upon them, and the snappers stood close by. The carrying boys, who were moving to and fro, escaped the direct effects of the hot air, but they were working rapidly. All were perspiring freely. Many of the buildings were wooden structures so loosely built that they afforded the workers little protection from drafts in severe weather. Often it was fiery hot near the furnace but icy cold a few feet off and to one side. In rolling mills the heat from the hot metal was intense and stifling.

In some establishments children were exposed to wetness. Flax is often spun wet, and silk is wound wet. In the flax-spinning rooms visited the girls were barefooted, or wore rubbers to protect themselves from the wet floors. In the bleacheries boys nearly naked, their only garment being a pair of short trousers, were trampling cloth in deep vats; others guided the wet cloth coming continuously

constant oversight of foremen and forewomen. The children were relieved from the strain of this occupation by being marched in squads two or three times a day to the toilet rooms.

Much of the work of the children, easy in itself, becomes exhausting, because performed at a high rate of speed. There are several ways by which children are forced or encouraged to work rapidly. One is by working them in gangs. This was the case with the doffers in cotton and worsted mills. The doffer takes full bobbins from the spindles of a spinning or twisting frame and puts empty ones in their places. The movements are simple, but are performed with marvelous quickness by the children who, while making them, are stooping to the level of the spindles. When a frame is ready to be doffed it is attacked by a gang of boys or girls, who place themselves before the frame, each a short distance from his next neighbor, and each must keep up with the others, so that all may finish their parts at the same moment. Thus the frame is doffed and ready again for the spinner in a very short space of time. The gang then goes to another frame, and then another, until all are doffed. After this follows a period of idleness, for it will be some time before the bobbins are again full and the frames ready for another doffing. In some of the mills a part, at least, of this idle time is utilized by putting the children to some simple task at which they can sit, as stripping or cutting waste from bobbins, or employing them as sweepers, but usually other children are employed especially for these tasks. Doffers were seen spending their idle time lounging on benches provided for them at the end of the rooms. At some Southern mills they were found out of doors at play. In spite of idle time, the work of doffing in a cotton mill was considered to be more taxing than spinning. In the South boys were almost universally used for this work; in Northern mills about as many girls as boys were found, but the average age was higher. In worsted mills the girl doffers were much more numerous than the boy doffers, but they did not carry their bobbins. Other children, usually boys, called bobbin setters, were employed for this purpose. They placed empty bobbins on the frames where they could easily be reached by the doffers, who in doffing, placed them upon the spindles, putting full bobbins in their places. The bobbin setters then gathered up and carted away the full bobbins. Children were forced to work rapidly, by being worked in teams with skilled workmen—adults—who were piece workers. In glass bottle factories usually three tending boys worked with one blower and one finisher. The latter were piece workers, and set the pace. Some blowers occasionally fee their mold boys and snappers, so much do their own earnings depend upon the faithfulness of these little helpers. The girls who helped the sewing-machine operators by trimming off the loose threads at the ends of

seams, were obliged to work quickly to keep up with the steady flow of garments coming into their hands. In the same way when work was delivered by machinery a speed was set for the workers.

Probably the greatest incentive to rapid work is payment by the piece. Many of the children employed in the establishments reported were piece workers. The spoolers, weavers, and drawers-in in cotton and worsted factories, and the toppers and knitters in knitting mills were piece workers. In boot and shoe factories many of the occupations were paid for by the piece, but only a small proportion of the children were employed at these occupations. In cigar factories the chief occupations, such as stripping, bunch making, and cigar rolling were piecework, but many of the children engaged at these occupations were employed by the day. Labeling, wrapping, and packing goods for the market was usually piecework. In establishments where blank books, bolts and rivets, brushes, corks, electrical supplies, furniture, paper boxes and bags, and soap were made children were employed as piece workers in some of the occupations. Possibly the most arduous piecework that children were found engaged upon was that of operating sewing machines in clothing factories. Although employers claimed that they did not intend to employ any children under 16 years of age at this work, many young girls were found.

Children were not often found operating dangerous machinery, yet many were employed about such machinery as helpers to the operators. A few, however, were operating stamping, cutting, and punching machines, some of whom bore on their persons evidences of injuries they had sustained, usually mutilation of the fingers. A greater danger came from the presence of children in rooms where machinery was in operation. Cases of accident were met with due to the playfulness of the children. In spinning rooms doffer boys chase each other up and down the aisles when the overseer's back is turned, and occasionally run into the machines and get hurt. One little girl pushed her companion into a frame, so that her hand was caught and injured sufficiently to keep her from work several days. Children were rarely employed to clean machinery while running, such employment being forbidden by law in many States. One case, however, was reported where a boy had been ordered to brush the chain head of a spinning frame while it was in motion, and while doing so his arm was caught in the gearing and torn in such a manner that he will never have the full use of it again.

Only a few statements are made here in regard to the moral influences which are brought into the lives of children through employment. Instances were found where parents excused themselves for putting their children to work on the ground that they wished to keep them off the streets. While this motive was of course combined with another,

there is no doubt that many parents were sincere in considering that for moral influence a factory or other place of employment was preferable to the public thoroughfare, especially in large cities. On the other hand, many parents frankly admitted that the influence of factory life on their children was bad and that they learned much from their associates that was to be regretted. Complaints were sometimes made of the rough language, seasoned with profanity, which overseers addressed to them. Instances of severity and injustice were met with in visits to establishments. On the other hand places were visited, usually large concerns, where the just and considerate character of the manager raised the tone of the whole establishment. Also employers were seen whose kindly and easy-going temper permitted an amount of loafing and disorder among their employees that impressed one in anything but a favorable light. Certain conditions were observed unfavorable to morality. One was the failure to secure in the average factory the proper privacy of the sexes. Closets, though separate, were so placed in relation to each other and the workroom that they were in full view of persons of both sexes working in their vicinity. Women were rarely provided with retiring rooms where they could put on and take off the outer garments they wore in the factory. The idle time of boys whose work was not continuous was usually spent in a way possibly more unfavorable to their moral growth than the labor they performed was to their physical development. Children are very ready to imitate their elders; thus the association of boys with men often leads them to adopt the habit of using tobacco at an age when they are most susceptible to its evil effects. At a glass factory many of the boys coming from work were observed to have cigarettes or pipes in their mouths. "They pick that up very soon," the overseer remarked. At a brewery beer was given away not only to the adult employees, but to the boys and girls, the boys receiving 1 pint and the girls half a pint every noon and evening. Children at work often appear older than they really are. Childhood with them seems to end at the beginning of labor. "They are no longer children after they go to work," a teacher remarked in speaking of the boys in the glass factories. Important and sometimes burdensome duties are required of children; they must be careful while at work not to get hurt, and they must give close attention to a simple but continuous series of movements. All this is a check upon the careless ways of childhood. There is no longer opportunity for freedom of motion; there is no longer that absence of responsibility which makes the young keep young.

WORKING CHILDREN.

As already stated 1,381 children who were found at work were made subjects of special inquiry. These children were found in the different *States* comprehended in this study, as follows:

NUMBER OF CHILDREN IN EACH STATE WHO WERE MADE SUBJECTS OF SPECIAL STUDY.

State.	Children.	State.	Children.
Massachusetts.....	76	Georgia.....	105
Rhode Island.....	78	Alabama.....	41
New York.....	122	Wisconsin.....	53
New Jersey.....	135	Illinois.....	122
Pennsylvania.....	315	Missouri.....	72
Maryland.....	67	Total.....	1,381
North Carolina.....	98		
South Carolina.....	97		

These children were employed in the establishments reported in Tables I, II, and III, except in the following cases: (1) About 50 children who were employed in establishments visited and afterwards excluded from the tables because of failure to obtain complete information from them. Some of these children were employed in industries which are represented in the table by other establishments, some were employed in industries not represented at all. Of the latter class are 7 boys who were employed in the telegraph and messenger service in New York City, 7 in the same service in Philadelphia, and 22 boys who were employed in 2 bituminous coal mines in Illinois. (2) A few children who were employed in establishments not visited. These children were brothers or sisters of other children reported who were employed in establishments visited. (3) Seventeen children reported for New York who were not employed in any establishment, but were working at home finishing garments for tailors.

NATIVITY AND NATIONALITY OF WORKING CHILDREN.

The nativity of the children reported is shown by the following table, which gives the number born in the States where they were found employed, in other parts of the United States, and in foreign countries, by States:

NATIVITY OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

State.	Number born in—										Total.	Per cent of children foreign born.
	State in which employed.	Other places in United States.	Canada.	Great Britain.	Ireland.	Germany.	Austria.	Italy and Sicily.	Russia.	All other countries.		
Massachusetts	39	5	6	6	1			2	1	a 16	76	42.1
Rhode Island	47	7	3	7			1	10	1	b 2	78	30.8
New York	77	8	5	3			2	18	8	c 1	122	30.3
New Jersey	100	17				5	1	5	4	d 3	135	13.3
Pennsylvania	271	9		9		7	3	7	6	e 3	315	11.1
Maryland	61	4					2				67	8.0
North Carolina	81	17									98	
South Carolina	61	36									97	
Georgia	92	13									105	
Alabama	21	20									41	
Wisconsin	40	5				8					53	15.1
Illinois	90	9	1	1		7	5	1	5	f 3	122	18.9
Missouri	52	14		3	2		1				72	8.3

a Including 9 born in the Azores, 5 in Greece, and 2 in Syria.

b Including 1 born in the Azores and 1 in Roumania.

c Born in Roumania.

d Born in France.

e Including 1 born in Belgium, 1 in France, and 1 nativity not reported.

f Including 1 born in Belgium, 1 in Norway, and 1 in Switzerland.

The column of percentages shows what proportion of the children were foreign born. Thus, the percentages of foreign born were 42.1 per cent for Massachusetts, 30.8 per cent for Rhode Island, and 30.3 per cent for New York, while only 8.3 and 3 per cent, respectively, are shown for Missouri and Maryland. None of the children reported for North and South Carolina, Georgia, and Alabama were of this class.

The nativity of children is not a complete indication of their nationality. It is necessary, also, to consider the nativity of their parents. The first of the two tables which follow gives, by States, the number of children reported whose fathers were born in the States where the children were found employed, in other parts of the United States, and in foreign countries; the second shows in a similar manner the nativity of the mothers of the children reported.

NATIVITY OF FATHERS OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

State.	Number of children whose fathers were born in—										Total.	Per cent of children whose fathers are foreign born.
	State in which child is employed.	Other places in United States.	Canada.	Great Britain.	Ireland.	Germany.	Austria.	Italy and Sicily.	Russia.	All other countries.		
Massachusetts	5	2	15	15	13	1	1	4	2	a 18	76	90.6
Rhode Island	10	6	12	9	20	1	1	14	1	b 4	78	79.5
New York	23	1	5	12	9	16	5	34	12	c 5	122	80.3
New Jersey	29	14		15	26	15	3	11	4	d 18	135	68.1
Pennsylvania	69	9	1	37	78	56	8	23	29	e 5	315	75.2
Maryland	46	6			4		3				67	22.4
North Carolina	75	23									98	
South Carolina	53	44									97	
Georgia	69	30	2							f 4	105	5.7
Alabama	10	31			8						41	
Wisconsin	4	3				42			1		53	86.8
Illinois	5	5	2	7	13	52	9	3	17	g 9	122	91.8
Missouri	17	16		6	13	16	4				72	54.2

a Including 11 children whose fathers were born in the Azores, 5 in Greece, and 2 in Syria.

b Including 3 children whose fathers were born in the Azores and 1 in Roumania.

c Including 1 child whose father was born in Roumania, 3 in Sweden, and 1 in Switzerland.

d Including 1 child whose father was born in Belgium, 3 in France, 12 in Holland, and 2 not reported.

e Including 1 child whose father was born in Belgium, 2 in France, 1 in Switzerland, and 1 not reported.

f Nativity of fathers not reported.

g Including 2 children whose fathers were born in Belgium, 1 in France, 1 in Holland, 1 in Norway, 3 in Sweden, and 1 in Switzerland.

NATIVITY OF MOTHERS OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

State.	Number of children whose mothers were born in—										Total.	Per cent of children whose mothers are foreign born.
	State in which child is employed.	Other places in United States.	Canada.	Great Britain.	Ireland.	Germany.	Austria.	Italy and Sicily.	Russia.	All other countries.		
Massachusetts ..	5	4	13	16	12	1	1		2	a 18	76	88.2
Rhode Island ..	6	8	12	15	16	1	1	14	1	b 4	78	82.1
New York	25	6	5	6	11	11	7	34	12	c 5	122	74.6
New Jersey	27	17		12	28	12	5	11	6	d 17	135	67.4
Pennsylvania ..	89	9	2	46	51	55	8	21	29	e 5	315	68.9
Maryland	45	9			5	5	3				67	19.4
North Carolina ..	79	19									98	.....
South Carolina ..	62	35									97	.....
Georgia	86	16			1	2					105	2.9
Alabama	15	26									41	.....
Wisconsin	6	6			1	39			1		53	77.4
Illinois	11	6		7	13	48	9	3	16	f 9	122	86.1
Missouri	24	16		3	14	11	4				72	44.4

a Including 11 children whose mothers were born in the Azores, 5 in Greece, and 2 in Syria.

b Including 3 children whose mothers were born in the Azores, and 1 in Roumania.

c Including 1 child whose mother was born in Roumania, 3 in Sweden, and 1 in Switzerland.

d Including 1 child whose mother was born in Belgium, 3 in France, 11 in Holland, and 2 not reported.

e Including 1 child whose mother was born in Belgium, 2 in France, 1 in Switzerland, and 1 not reported.

f Including 2 children whose mothers were born in Belgium, 1 in France, 1 in Holland, 1 in Norway, 3 in Sweden, and 1 in Switzerland.

The above tables show that the proportion of children having foreign-born parents is much greater than the proportion of foreign-born children. In Illinois 91.8 per cent of the children reported had foreign-born fathers, in Massachusetts 90.8 per cent, and in Wisconsin 86.8 per cent, while in Maryland and Georgia but 22.4 and 5.7 per cent, respectively, had foreign-born fathers. None of the children reported for North and South Carolina and Alabama had foreign-born fathers. The information concerning children with foreign-born mothers is similar to that concerning those with foreign-born fathers, the percentages, however, being several points lower for each State except Rhode Island.

It will be seen from the information given by these tables that practically none of the children living in the four Southern States, that only 22 per cent of those living in Maryland, and from more than 50 per cent to more than 90 per cent of those living in the remaining eight States were of foreign nationality. In most cases the country of the parents' nativity indicates the nationality of the children reported in these tables, but the children of parents born in Russia are without exception Jews, many of the children of parents born in Germany are Poles, a few of the children of parents born in Austria are Hungarians and Bohemians, and most of the children of parents born in Canada are French Canadian. No colored children are included in the numbers reported.

AGES OF WORKING CHILDREN.

By visiting the parents of individual children it was possible to learn not only the present ages of these children but also the ages at which they began to work. This information is given, by States, in the two tables which follow:

AGES OF CHILDREN UNDER 16 YEARS, AT DATE OF INVESTIGATION, BY STATES.

State.	Number of children who were at date of investigation—								Total.
	8 or under 9 years of age.	9 or under 10 years of age.	10 or under 11 years of age.	11 or under 12 years of age.	12 or under 13 years of age.	13 or under 14 years of age.	14 or under 15 years of age.	15 or under 16 years of age.	
Massachusetts.....							36	40	76
Rhode Island.....					14	16	16	32	78
New York.....		1	2	4	8	7	50	55	122
New Jersey.....				4	13	18	59	41	135
Pennsylvania.....		1	1	1	14	87	117	94	315
Maryland.....			1	1	9	16	28	17	67
North Carolina.....			1	10	15	11	26	19	98
South Carolina.....	2	2	15	17	17	16	13	15	97
Georgia.....	1	1	15	16	24	16	16	16	105
Alabama.....	1	2	6	7	7	9	4	5	41
Wisconsin.....						2	5	34	53
Illinois.....							1	54	67
Missouri.....			1		7	12	28	24	72

CHILDREN OF EACH SPECIFIED AGE UNDER 16 YEARS, WHEN FIRST EMPLOYED, BY STATES.

State.	Number of children who were when first employed—										Total.
	Under 8 years of age.	8 or under 9 years of age.	9 or under 10 years of age.	10 or under 11 years of age.	11 or under 12 years of age.	12 or under 13 years of age.	13 or under 14 years of age.	14 or under 15 years of age.	15 or under 16 years of age.	Age not reported.	
Massachusetts.....					2	2	4	61	7		76
Rhode Island.....					1	35	20	16	6		78
New York.....		2		5	3	7	24	72	7	2	122
New Jersey.....	a 1			3	14	28	35	45	9		135
Pennsylvania.....		2	3	7	18	54	165	58	4	4	315
Maryland.....				3	14	18	23	9			67
North Carolina.....	b 6	13	18	33	9	14	3	1	1		98
South Carolina.....	a 8	10	17	23	22	9	6	1	1		97
Georgia.....	a 4	6	20	20	21	21	8	4	1		105
Alabama.....	c 2	6	4	8	10	4	6	1			41
Wisconsin.....					1	3	16	32	1		53
Illinois.....						2	6	91	23		122
Missouri.....				1	2	16	17	31	4	1	72

a Seven years old.

b Including 1 child 6 years old and 5 children 7 years old.

c Including 1 child 6 years old and 1 child 7 years old.

The first table shows that at the time when the States were visited for the purposes of this study children under 10 years of age were at work in New York, Pennsylvania, North Carolina, South Carolina, Georgia, and Alabama; that children under 12 years of age were at work in these States and in New Jersey and Missouri, and that except in Massachusetts children under 14 years of age were at work in all the States. Of the children reported under 14 years of age for New York 13 were working at home helping their mothers or older members of their families to finish garments for tailors. This industry was not included in the provisions of the child labor law, which prohibited the employment of children under 14 years of age in manufacturing and mercantile establishments.

The principal fact shown by the second table is that in States where

there has been in the past practically no restriction of child labor, children have commenced work at a very early age. Many of the children reported in this table for North and South Carolina, Georgia, and Alabama began to work at 7 years of age or under 10 years of age. Some of the children reported for each of the other States began to work below what is now the legal age for that State. In many cases work was not begun in the State in which they were found at work, also in many cases children began to work in industries or occupations not covered by the laws relating to child labor. Thus, of the 8 children reported for Massachusetts who began to work under the age of 14 years, 3 began in cotton factories in England, and of these 2 began at 11 years of age and were "half timers," i. e., they worked according to the English system—spending half the day in the factory and attending school the other half. Of the remaining 5 who began to work before they were 14 years old, 1 began in a boot and shoe factory in Brooklyn at 12 years of age, 1 began in a knitting factory in Massachusetts and worked three weeks during the summer vacation preceding her fourteenth birthday, stopped when school began, and did not go to work again until of legal age; 2 others began in department stores in Boston, and 1 worked for two years after school and Saturdays as errand boy for a grocer.

SCHOOLING AND LITERACY OF WORKING CHILDREN.

One of the strongest arguments against child labor is that it deprives the child of an education by substituting for time which might be spent at school long hours of monotonous toil, the effect of which is to arrest rather than to stimulate the progressive development of his faculties. Information was obtained in regard to the attendance of the children reported at school before they began to work, their attendance after they began to work, and the number able to read and write the English language. The following table gives the number of children who had attended school before beginning work, by specified periods of time and by States:

SCHOOL ATTENDANCE BEFORE BEGINNING WORK OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

State.	Total children.	Children having attended—						Number not having attended.
		Less than 1 year.	1 year or less than 3.	3 years or less than 5.	5 years or less than 8.	8 years or more.	Attendance not reported.	
Massachusetts	76		5	1	23	42	3	2
Rhode Island	78	1	2	5	53	15	1	1
New York	122		15	11	60	33		3
New Jersey	135		4	8	101	19	1	2
Pennsylvania	315		2	22	264	17	9	1
Maryland	67		5	14	44	3		1
North Carolina	98	9	50	20	3		4	12
South Carolina	97	16	37	18	9			17
Georgia	105	21	44	16	6	1		17
Alabama	41	7	14	8	1			11
Wisconsin	53			1	44	1		7
Illinois	122			2	108	13		4
Missouri	72			9	60	1		2

The term "year" as used in this table means a school year, or rather it means all the schooling that it was possible to obtain within a calendar year in the place where the child lived. The school period, of course, was not the same in all the States. This fact renders the information given by the table less precise than is desirable. Most of the children reported for all except the four Southern States were living in cities or towns having school years of from nine to ten months and most of them had attended school in such cities or towns. On the other hand most of the children reported for the four Southern States lived during the year when they might have attended school in country places having yearly terms of from four to seven months only. It is therefore necessary to remember in considering the information presented by this table that a year in Massachusetts, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Wisconsin, Illinois, and Missouri means a period of from nine to ten months, while in North Carolina, South Carolina, Georgia, and Alabama it means a period of from four to seven months. There were a few children reported from the latter States who had attended school in towns of over 8,000 inhabitants, having schools running eight or nine months, but these were scarcely 5 per cent of the whole number reported.

The table shows that 12 out of 98 children in North Carolina, 17 out of 97 in South Carolina, 17 out of 105 in Georgia, and 11 out of 41 in Alabama had not attended school at all before beginning work, and that no larger number than 3 in any of the other States were reported in this category; also, that 9 children in North Carolina, 16 in South Carolina, 21 in Georgia, and 7 in Alabama had attended school less than 1 year, as against 1 in Rhode Island and none in the remaining States. Of the children who had attended school, the time of attendance for the greatest number in the four Southern States falls between 1 and 3 years; in all the remaining States except Massachusetts the greatest number falls between 5 and 8 years. In Massachusetts more than half the children reported had attended school 8 years or more. But the attendance of 3 children in Massachusetts, 1 in Rhode Island, 1 in New Jersey, 9 in Pennsylvania, 4 in North Carolina, 7 in Wisconsin, 4 in Illinois, and 2 in Missouri was not reported.

All of the States included in this report except the four Southern States and Missouri have school-attendance laws which compel children within specified ages to attend school a certain length of time each year. This time is the full annual term in these States, except in Wisconsin, where it is not less than 8 months in cities or less than 5 months elsewhere, and in Illinois, where it is 16 weeks, 6 of which must be consecutive. The ages of compulsory school attendance are from 7 to 14 in Massachusetts, Wisconsin, and Illinois; from 7 to 12 in New Jersey; from 7 to 15 in Rhode Island; and from 8 to 16 in New York, Pennsylvania, and Maryland. But in Rhode Island, New York,

Pennsylvania, and Maryland children of an age to be employed at labor are exempt. The enforcement of the compulsory school attendance provisions of the New Jersey school law is made to depend upon conditions which make it practically voluntary, and it is not enforced in many of the important cities of the State. The law in Maryland applies only to the city of Baltimore and to Allegany County. It was passed in 1902, but attendance officers did not begin to serve until January 1, 1903. There was therefore no compulsory school attendance in the State before the children reported began to work. Although there is at present no compulsory school-attendance law in the Southern States investigated, many manufacturers consider the method of compulsory education superior to any other for preventing the employment of children at too early an age, but at the same time contend that laws merely restricting their employment under a specified age will prove to be of little avail unless reenforced by legal provisions compelling their attendance at school below that age.

The child-labor laws of several of the States require certain educational qualifications for children seeking employment. At the time the children reported were visited the Rhode Island law required for a child seeking employment an attendance at school of 80 days during the year preceding his application, the law of New York required a full yearly term; that of New Jersey, 12 weeks; and that of Pennsylvania, 16 weeks. The laws of Massachusetts, Rhode Island, New York, and Pennsylvania required an ability to read and write the English language, but in Massachusetts illiterates could be employed provided they attended night school. In Missouri boys were required to be able to read and write in order to be employed in the mines. The child-labor law of Rhode Island was amended in April, 1902, all educational requirements being removed and provisions made that children under 13 years of age could not be employed at labor except during the vacation of the schools. The South Carolina law, which went into effect May 1, 1902, provides that children under the legal age (12 years, May 1, 1902) may be employed in textile factories during school vacations provided they have attended school $\frac{1}{2}$ months during the year and can read and write the English language. Important additions were made to the law in New York in the winter of 1903, so that now a child not only must have attended school 160 days during the year previous to making application for a labor certificate, but he must have received instruction in certain specified branches of study, viz, reading, writing, English grammar, and geography, and he must be "familiar with the fundamental operations of arithmetic to and including fractions."

The table gives no information in regard to the kind of school attended by the children who attended school before beginning work. A majority of the children reported for the Eastern, Middle, and Western States attended city public schools, but most of the Irish,

French Canadian, German, and Polish children attended parochial schools a part if not all of the time during which they were in school. A few children of foreign nationality went to private schools kept by persons of their own nationality. A few of the foreign-born children had attended school in the country from which they came. Of the children reported for the Southern States, nearly all who had attended school at all had attended the district schools of the county in which they were born. These schools were supported by State money and called "free schools" by the country people, to distinguish them from the "subscription schools," which were kept often by the same teachers after the public funds had given out, and which were paid for by the voluntary subscriptions of farmers in the neighborhood. These subscription schools sometimes added two or three months to the length of the school term. Very few, however, of the children reported had attended subscription schools, although many told of such schools being held near their homes. Usually their parents had felt too poor to afford the expense. The attendance even upon the free schools was very irregular. Living on farms, the children were often obliged to go long distances, and bad weather was sure to keep them at home. But the chief reason for irregular attendance, or none at all, was the indifference of the parents. Those especially who had had no schooling themselves failed to appreciate its value and were unwilling to make sacrifices in order to send their children.

The attendance of children at school since beginning work is shown by the following table, which gives the number having attended a specified number of months, by States:

SCHOOL ATTENDANCE SINCE BEGINNING WORK OF CHILDREN UNDER 16 YEARS OF AGE,
BY STATES.

State.	Number having attended—					Num-ber not having attend- ed.	Number not hav- ing attend- ed either before or since be- ginning work.
	Less than 2 months.	2 months or less than 6.	6 months or less than 11.	11 months or more.	Attend- ance not re- ported.		
Massachusetts.....	3	15	5	2	.....	51	1
Rhode Island.....	3	18	17	6	4	30	1
New York.....	7	11	6	5	.....	93	3
New Jersey.....	37	32	6	4	3	53	2
Pennsylvania.....	.....	3	6	.....	.....	306	1
Maryland.....	4	9	2	3	1	48	1
North Carolina.....	12	6	10	2	4	64	8
South Carolina.....	6	8	3	.....	.....	81	15
Georgia.....	6	16	12	1	.....	70	10
Alabama.....	7	3	1	.....	.....	30	4
Wisconsin.....	.....	.....	.....	.....	.....	58	.....
Illinois.....	.....	1	.....	1	.....	120	.....
Missouri.....	.....	.....	.....	.....	.....	72	.....

In Wisconsin and Missouri none of the children reported had attended school since beginning work, less than 3 per cent had attended in Illinois and Pennsylvania; about 16 per cent in South Carolina;

about 25 per cent in New York and Maryland; about 33 per cent in Massachusetts, North Carolina, Georgia, and Alabama; and about 50 per cent in Rhode Island and New Jersey. But the table does not show whether the schools attended were day schools or night schools. In the former case the attendance occurred when the child was out of employment; in the latter the child was regularly employed during the day. The schools attended since beginning work were day schools in Rhode Island, North Carolina, South Carolina, Georgia, and Alabama. They were usually night schools in Massachusetts, New York, New Jersey, Pennsylvania, and Maryland.

The large attendance at day schools in Rhode Island was due to the provision of the education law in force when the State was visited, which required all children under 15 years of age employed at labor to attend school at least 80 days (about 100 in Providence) unless excused for specified reasons. This provision was enforced by truant officers who, when the proper time came, would notify employers to discharge those of their child employees who were due at school. Thus each child's year was made up of seven or eight months of labor and four or five months of school. The observance of this law, however, was not uniform throughout the State. It was in disfavor with both manufacturers and school authorities. The latter claimed that the broken terms of schooling were of little advantage to the children who, after beginning work, lost all interest in their studies. It was amended, as already stated, soon after the State was visited for the purposes of this investigation. Now children can not begin to work until 13 years of age. Children 12 years old must attend school the entire term, and children 13 and 14 years old may work without interruption.

In New Jersey many children at work were attending night schools. The law provides that "No child under the age of fifteen years shall be employed * * * in any business whatever, unless such child shall have attended, within twelve months immediately preceding such employment, some public day or night school, or some well-recognized private school." This law is interpreted to mean that a child must attend school after he has begun work each year until 15 years of age. Many employers were requiring children to have certificates of attendance at night school. Some of the glass companies were paying teachers to hold school for the tending boys. These schools were opened one or two hours in the afternoon for boys on night work, and at 5 o'clock or later in the evening for boys on day work. .

The Massachusetts laws permit persons under 21 and over 14 years of age who can not read and write the English language to be employed if they attend night school. The employers of these minors are required to keep on file attendance cards signed by their teachers and to discharge anyone whose record falls below a certain standard.

Children in the Southern States not infrequently leave work to attend school. Usually when laid off because of slack work or other cause they spend the idle time at school. Older children often leave the mill when their younger brothers and sisters are of an age to be employed in order to get a few months' schooling for which they have had no opportunity in the country. When the factories are within city limits the children have the advantage of city schools. But many factories were found situated either just beyond the city limits or altogether in the country, where schools were supported by the State school fund, apportioned according to the number of children of school age. This fund was rarely sufficient to support a school more than three or four months in a year, and in some places it could not be used at all unless the people furnished a building in which the school could be held. Some manufacturers were found who had furnished this building for their employees, and often added to the fund so that the school term might be lengthened, or a larger number of teachers be employed, or both. A company often does so much that the school is virtually under its management. Some of the buildings furnished were found to be very handsome and well equipped, and contained besides the schoolrooms a public library and a hall for social gatherings. Such buildings were found at large establishments in South Carolina and Georgia. In North Carolina, where the factories were as a rule smaller, the local authorities often had full charge of the schools, the manufacturers contributing to their support through local taxation. Many of the parents visited in these States expressed a desire to have their children attend school, and a few were making sacrifices that some of them at least might go; many more showed little interest in the schools and made petty excuses for keeping at home the children too young to be at work. Some parents not only failed to appreciate the advantages of the factory town, but regretted having left the country, because farm life, they thought, afforded better opportunities for schooling than factory life. They said that in the country there would be a portion of every year when there would be no work to be done on the farm at which the children could help and when they could go to school, but in town there was no time in the year when the factory work stopped, so there could be no schooling except at the expense of the children's earnings. In several of the towns visited missions had been established in the neighborhood of the mills at which night schools were conducted. A few of the children who had attended school since beginning work had availed themselves of the opportunities thus afforded.

The last column of the table shows the number of children who had not attended school either before or since beginning work. The number is considerable in the four Southern States. The parents of a few of these children declared that they meant to take them out of the

mill within a few years and give them a chance to go to school. The children reported in this column for the remaining States, except for Maryland, were foreign born. The child reported for Massachusetts had been in this country less than a year, and had been at work only three weeks; he was visited in August, and hence had had no opportunity to attend night school. The children reported for Rhode Island and New Jersey had been in this country less than two years. Those reported for New York were Italians, and employed in finishing garments at home. One of them had been in this country less than a year, one had been here five years, and the third eight years. The child reported for Pennsylvania had been here one year; he was a breaker boy, 10 years of age. Most of these children were unable not only to read and write the English language, but also to speak it.

The literacy of the children reported is shown in the following table:

LITERACY OF CHILDREN UNDER 16 YEARS OF AGE, BY STATES.

State.	Number unable to read and write English—			Number able to read and write English.
	Or any other language.	But able to read and write another language.	Total.	
Massachusetts	4	4	8	68
Rhode Island	3	4	7	71
New York	6	7	13	109
New Jersey	4	2	6	129
Pennsylvania	3	5	8	307
Maryland	4		4	63
North Carolina	a 21	(a)	a 21	b 73
South Carolina	36		36	c 61
Georgia	31		31	d 74
Alabama	14		14	e 27
Wisconsin				53
Illinois		1	1	121
Missouri				72

a Not including 4 persons whose literacy was not reported.

b Including 13 persons who could read but not write, but not including 4 persons whose literacy was not reported.

c Including 9 persons who could read but not write.

d Including 15 persons who could read but not write.

e Including 7 persons who could read but not write.

Many of the foreign children, while unable to read and write English, could read and write their native language and had attended school before coming to this country. Such children are not really illiterates, and are therefore separated in the table from the children unable to read and write English or any other language. The total number of children unable to read and write English in North and South Carolina, Georgia, and Alabama is comparatively large, rising from more than 21 per cent in North Carolina to more than 37 per cent in South Carolina. Many of the children reported from these States as able to read and write English could read, but were unable to write. A comparatively large number of the illiterate children in all the States had had some schooling, as will be seen by comparing the total number of illiterates with the number of children who had not attended

school either before or since beginning work, as given in the preceding table. Many parents confessed with regret that their children had forgotten all that they had been taught, and in many instances said they meant to give them another chance. On the other hand, many children had failed to learn to read and write, and their parents considered it useless to keep them longer in school.

It is sometimes asserted that young children who have been employed at labor a few years become stunted mentally and unable to learn if they are afterwards put in school. This assertion has been made with reference to the South, where children begin to work at an earlier age than in other parts of the country, but no evidence was found to warrant it as the statement of a general fact. On the other hand, teachers in the South, of whom inquiry was made, were unanimous in stating that they observed no difference in the mental power and capacity to learn between the children in their classes who had been at work and those who had not. Those who had been at work often made better progress than those who had not, being more diligent and showing a greater desire to make the most of their opportunities. A few children were found, however, in both Northern and Southern factories who undoubtedly were the worse for their years at labor and who appeared to be stunted both mentally and physically.

HEALTH OF WORKING CHILDREN.

Facts available for tabulation were not obtained in regard to the physical condition of children at work. Some general information was derived from observation of the children themselves and from questions put to their parents. Many of the children seen in the establishments visited appeared to be undersized, the pinched worn faces, the thin arms and puny bodies of many of them giving evidence that they were of underweight. Among the children reported many were physically unfit for the labor required of them. A few who began work before they were 10 years old, though not actually broken down, were at 15 so worn, their energies so far exhausted, that advancement in productive power much beyond the point already reached seemed quite improbable unless a period of complete rest should intervene.

Very few of the parents of the children reported for Massachusetts, Rhode Island, New York, New Jersey, Wisconsin, Illinois, and Missouri admitted that the health of their children had suffered from the labor required of them, many claiming that they were in better health than before they went to work. But considerably more than half of the children reported for these States had been at work less than a year. Very few had worked more than two years. A few cases of minor ailments were found. One boy had frequent headaches while in a cotton factory, and on being advised by the doctor to change his employment had obtained work as helper in the washhouse of a

bleachery, where he was feeling better. Another little fellow complained that the heat in the drying room of the bleachery where he was employed made his head ache, but added proudly that he had never asked to be let off. A girl of 15 who had worked more than three years, first for a shirt manufacturer and afterwards for a flax-spinning company, said she had headache all the time and was tired of working. The dust in a flax mill had given two other children sore throats. A girl was found at home in bed with an attack of bilious fever three days after she was seen at a silk factory. Her mother said it was a common occurrence and that she lost much time in this way. Several girls employed at a cigar factory as strippers complained that the tobacco nauseated them. Most of the mothers of the glass-factory boys who were questioned frankly admitted that they considered night work bad for their sons. One whose boy had been at work about five months said that he had become very restless and was not sleeping well. Many of the boys who were on night work were found out of bed between 9 and 11 in the forenoon. Their mothers said that they were usually up by 9 o'clock, but that they would sometimes take a nap in the afternoon before going to work. Some of the glass factory boys whose parents declared that their health was good were thin and looked worn-out. This was especially the case with two boys 13 years old, twins, who had worked through three "fires" at three different factories and had been three months at the fourth. Another boy, who had also worked through three fires, beginning when 11 years of age, was hollow under his eyes, and thin. He complained of his back, which ached constantly, and of frequent colds, but his mother declared that he was stronger than when he began to work.

More than half the children reported for Pennsylvania and Maryland had worked over one year but not over two years. Very few parents admitted that these children had suffered in health. Nearly one-fourth of the Pennsylvania children had worked from two to five years. Many of these were boys, employed in the breakers, of whom a majority were undersized. They looked stunted rather than delicate. They possessed warped, stooping figures, brought about by the strained position in which they sat while at work. The work was hard upon the hands and fingers. One little fellow wore gloves to protect his hands from the rough coal and slate. One boy who worked six months as a bobbin boy at a silk mill before obtaining employment in the breakers declared that the millwork used him up more than slate picking. A boy of 14, employed as helper in the dyehouse of a worsted mill, was made ill by the fumes from the various chemical substances used. He was removed after two weeks and given work as a bobbin boy in the spinning room. Another, employed to handle skins at a glove factory, was found at home with a sore hand. He had

had a small sore which the acid on the skins had poisoned and made worse. In Maryland a number of parents whose children worked in a cotton factory complained that the little ones took frequent colds from getting overheated. One boy was so run down after working fifteen months as a filling winder at the same factory that he was taken out and made to help his father in his business as huckster, but after two months he was sent back to the mill. A girl employed at a cigar factory left after six months because stripping made her sick; she obtained work in the laundry department of a shirt factory where she had worked nearly two years and had kept perfectly well. The mother of a boy of 14 who had been working six months in the tin shop of a tobacco factory said that his health was bad; that he had a cough and a tendency to consumption.

Of the children reported for North and South Carolina 75 per cent had worked more than one year, and 50 per cent had worked more than two years. Of the children reported for Georgia 60 per cent, and for Alabama 70 per cent, had worked more than one year, and about 35 per cent for Georgia and 25 per cent for Alabama had worked more than two years. Many reported for these States had worked more than three years, some four and five years; one boy had worked seven years, having begun at the age of 7. According to the testimony of their parents, a majority of the children had had no acute sickness since beginning work, but a large proportion of this number did not have good health. A few were not strong before they began to work. Of these some had gained in health, but more had lost since beginning work. Many of those who had good health before beginning work had failed since. Such children appeared worn and tired, and were thin and had pale or sallow faces. Of all the children reported for the Carolinas about 65 per cent had had no acute sickness since beginning work. These included about 40 per cent who were in good health and about 25 per cent who had fair health. The remaining 35 per cent had had some acute illness, which had caused them to lose considerable time, and they were usually reported to have either fair or bad health. Similar percentages could be shown from the testimony of parents in Georgia and Alabama. To what extent this condition was due to long hours of factory labor, or to what extent to the manner of living which prevailed among the factory people, could not be determined. These people were noted for unwholesome cookery and a dietary consisting chiefly of pork and hot biscuits. Many of them, however, kept cows and chickens, which furnished them with fresh milk and eggs, and cultivated small gardens in which they grew vegetables in their seasons. The most common disorders found among the children who had had more or less acute sickness were intestinal disorders, malaria or slow fever, and throat troubles. A few girls

had had special pelvic disorders. There were also cases of contagious diseases—as smallpox, measles, and mumps. The parents of the children who were working at night were almost unanimous in their opinion that it was bad for them. These children did not sleep well, and became nervous and restless. The work was especially bad for their eyes. A father pointed out the dark rings about the eyes of his boy and the heavy drooping lids as the peculiar marks of the night-working child.

The following are typical cases of children at work in Southern factories, selected to illustrate conditions in regard to health:

Robert M., 9 years old, who began to work at 7, had no special sickness, but was not so well as when in the country. After he had worked two months his parents took him back to the farm where he stayed fifteen months, when he was again sent to the mill.

Silas L., 13 years old, who had been working four years, gets run down, especially in the summer. He had taken no vacation but stayed out a day now and then to rest.

Mrs. C. claimed that her children had better health than when they were in the country, but were all afflicted, pretty constantly, with “a misery inside of them.”

Addie S., 13 years old, got constipated and bilious and was obliged to lose a few days every two or three weeks on account of a slight fever.

Earl S. strained his chest when doffing, otherwise he had been as well as when on the farm. He had worked eighteen months. Other boys complained of backache or pain in the side from doffing.

Willie C., nearly 15, had been subject from a small child to disorders of the throat. He had been worse since beginning to work two years ago.

Bertha J., nearly 14, was disagreeably affected with a constant desire to spit and chew something when in the spinning room where she worked eighteen months. For more than two years she had been working in the cloth room and had been free from this trouble.

Barry P., 14 years old, had a singularly old face. He was thin and his complexion sallow. He had worked three years as a spinner.

Maggie M., now 14, began to work when she was 8 years of age. She was then not considered well enough to go to school. She would work a few weeks and rest a few weeks. She continued in this way for two and one-half years when the family moved to its present home. Since then her health had been better and she had worked constantly for three years and a half. She was, however, an under-sized child, thin and pale, but bright and motherly with her younger brothers and sisters.

Maggie D., 15, was paralyzed in one side. She was refused work at the first factory to which she applied on account of her lameness

and delicate appearance, but obtained it at the second, where she had worked for more than two years. She was not strong, however, and had a poor appetite, often going to work without her breakfast.

Dolly P., 13, had only fair health. She lost several weeks last summer with malaria. She wanted to try night work, and was changed to the night force in her mill a month before. She did not sleep well, and would be glad to change back.

Edna B., 14 years and 10 months, became very much run down during three years that she was on night work. Her parents sought day work for her at another mill, where she had been employed six weeks, during which time she had gained 7½ pounds.

John W., who had been working 7 years, having begun when he was 7, reported no illness except colds; but he was considerably run down. His parents hoped he would improve if allowed to have one-half of each day off. Permission was granted him, and he attended a mission school for three hours in the forenoon. But he was not always sure of his time, for if they were short of hands at the mill the superintendent sent for him, and he was obliged to work and lose a morning from school.

HOME CONDITIONS OF WORKING CHILDREN.

The 1,381 children who have been reported individually belonged to 1,036 families, distributed as follows among the thirteen States:

NUMBER OF CHILDREN INDIVIDUALLY REPORTED, BY STATES.

State.	Children.	Families.	State.	Children.	Families.
Massachusetts	76	72	Georgia	105	50
Rhode Island	78	66	Alabama	41	17
New York	122	112	Wisconsin	53	49
New Jersey	135	100	Illinois	122	113
Pennsylvania	315	247	Missouri	72	57
Maryland	67	47			
North Carolina	98	53	Total	1,381	1,036
South Carolina	97	53			

With the exception of 6 children reported for Rhode Island, 1 for New York, and 2 for Maryland, all the children belonging in these families who were under 16 years of age and were employed at remunerative labor were reported; thus these figures show the average number of children per family who were employed at labor. These averages varied from less than 1.1 children per family of the families reported for Massachusetts, New York, Wisconsin, and Illinois, to 2.4 children per family of the families reported for Alabama. Some of these families were very large, numbering eleven or more members, but the larger memberships usually included boarders or lodgers as well as relatives of the children reported. The average membership was a fraction over six for the families reported for New York, New

Jersey, Pennsylvania, Illinois, and Missouri, a fraction over eight for the families reported for Alabama, and seven, or a fraction over seven, for the families reported for the remaining States.

The greater portion of these families rented their homes. The number of homes owned by the families reported for Pennsylvania, Illinois, and Wisconsin was comparatively large; the percentages ranging from about 30 per cent in Pennsylvania to about 45 per cent in Wisconsin. Less than 15 per cent of the families reported for the remaining States owned their homes. Many Polish families in Milwaukee were found owning their homes. They lived in shanties which they had built on the rear end of their lots and rented to others a better house in front. About 15 per cent of the Maryland families owned the houses in which they lived and paid a ground rent. All varieties of dwellings were represented by the homes of these families, but two predominate—the city tenement and the cottage of the factory village or town. The greater number of families reported for all but the four Southern States were living in city tenements, in houses containing—with the exception of most of those found in Baltimore, Philadelphia, Milwaukee, and New York City—from two to six or eight families. In the first three cities excepted most of the houses contained only one family each, but in New York City more than half the families were living in houses containing more than eight families each, many accommodating twenty and twenty-four families; one contained thirty-four families. These were in the down-town districts of Manhattan, where the streets are always crowded, and where the home surroundings of the working children are in striking contrast to the home surroundings of the children reported for the four Southern States and of many reported for New Jersey, Pennsylvania, and Illinois who were living in the country. The families reported for the Southern States were found usually in factory villages, living in dwellings erected by the companies. The cottages were built to accommodate one or two families, and in many villages were surrounded by gardens. There was plenty of fresh air and the country lay close at hand. Yet although the Southern families thus had more space about their homes than a majority of those reported for other parts of the country, they often had less accommodation within. Measured in number of rooms occupied by each family, the average accommodation in the four Southern States and in Missouri and Wisconsin was about one-half of a room to each person, in New York it was 0.6 of a room, in Massachusetts, Rhode Island, New Jersey, Pennsylvania, and Illinois it was 0.7 of a room, and in Maryland it was 0.8 of a room per person.

It would not be possible, nor is it necessary, to enter at length upon a description of the equipments for living found within the dwellings

of these working children. They and the families to which they belong represent all kinds of people, including the lazy and shiftless as well as the energetic and thrifty. Some of the houses were squalid and insanitary within, others were spotlessly clean. Some were meanly furnished, others well furnished, and in yet others luxuries such as organs, pianos, books, and pictures were found. As a rule the dwellings of the Italian, Portuguese, and Polish families and some of the French Canadian were meanly and scantily furnished, with occasional attempts at decoration, such as bright-colored prints upon the walls, paper flowers in vases, etc. The dwellings of the English, Irish, Germans, and Americans, except in the Southern States, were well furnished, with many comforts and even luxuries. In the Southern States the rooms were, as a rule, rather bare, but there were notable exceptions. Many parlor organs and sewing machines were seen, some front rooms containing, besides the bedstead and a few chairs, a center table upon which the family Bible and a few other books were displayed. Occasionally there were cheap ornaments on the mantel and about the room. Crayon enlargements from photographs of members of the family were often seen upon the walls.

Some effort was made to obtain data in regard to the incomes of the families of the working children reported in order to show not only the economic condition of these families, but also the comparative value of the contributions of the children under 16 years of age. The result was not entirely satisfactory, because accurate average weekly incomes were not obtainable, i. e., averages for a period of time; but figures representing the weekly income at the time the family was visited, based upon the usual weekly earnings of the contributing members, were obtained for nearly all the families considered. All the families for whom earnings of members were reported had one or more children under 16 years of age at work and contributing their earnings to the family income, except in a very few instances. The number of families having one, two, three, and four or more children under 16 years of age contributing to the family income is given in the following table by States:

FAMILIES HAVING EACH SPECIFIED NUMBER OF CHILDREN UNDER 16 YEARS OF AGE CONTRIBUTING TO THE FAMILY INCOME, AND TOTAL CHILDREN CONTRIBUTING.

[The total number of children shown in this table differs from the total number individually reported given in previous tables. This is because a few children were found contributing to the family income who were not individually reported, and a few who were individually reported were learners or helpers and not contributing. In case of six families and ten children income was not reported.]

State.	Total number of families.	Families having each specified number of children under 16 years contributing.				Families having children under 16 years not contributing.	Total children under 16 years contributing.
		1 child.	2 children.	3 children.	4 children or over.		
Massachusetts.....	72	66	4	1	.....	1	77
Rhode Island.....	66	50	14	2	.....	.....	84
New York.....	112	96	13	1	.....	2	125
New Jersey.....	100	68	24	5	1	2	185
Pennsylvania.....	a 245	180	63	1	.....	.....	813
Maryland.....	47	26	20	1	.....	.....	69
North Carolina.....	53	22	20	8	3	.....	98
South Carolina.....	53	22	22	5	4	.....	97
Georgia.....	50	11	27	9	3	.....	104
Alabama.....	17	4	5	6	2	.....	40
Wisconsin.....	49	46	2	1	.....	.....	58
Illinois.....	a 111	100	9	.....	.....	2	118
Missouri.....	a 55	41	13	1	.....	.....	70
Total.....	b 1,030	732	236	41	14	7	1,383

a Not including two families, data not reported.

b Not including six families, data not reported.

Besides children under 16 years of age there were in all but a very small number of the families reported older members contributing to the family income. There was a father or person standing in the place of father to the working children in from 65 to 90 per cent of the families reported, but an average of 10 per cent of the families having fathers were receiving no help from them. Many of the idle fathers considered themselves at 50 years of age too old to work, while others were too much broken in health. In many instances where the father was at work his employment was irregular and his contribution small. In many families having fathers, both at work and not at work, the mothers were engaged in some remunerative occupation and contributed to the support of the family. In New York City many of these mothers were finishing garments for tailors; others were doing janitor service in the tenement buildings in which the family lived. In some families having no fathers the mothers were at work and helping in the family support. In other instances the mother was doing nothing when it seemed as if she were better able to work than the children upon whom she was depending for support. In still other instances she was evidently unable to work and was necessarily dependent either upon her children or upon charity. Most of these mothers were widows, but many had been deserted by their husbands. A majority of the families had children over 16 years of age who were at work. Usually these children were contributing their entire earnings to the common fund. This was often found to be the case even with young men old enough to be voters. Many of the older children merely

boarded at home. The proportion of families having children contributing by their board only was greater in the four Southern States than in any of the other States considered. The largest percentages of families having boarders and lodgers, not children, were found in Massachusetts and North Carolina, where 78 and 57 per cent, respectively, of the families reported had boarders or lodgers. More than 25 per cent of the families in each of the remaining States had boarders or lodgers, except in Pennsylvania, Illinois, and Missouri, where very few were found. Occasionally families had incomes from outside sources, such as rents or produce from farms and gardens. But except in one or two instances a very small part of the total incomes were derived from such sources.

The following table gives the number and per cent of families with classified weekly income from all sources of less than \$12, of \$12 or less than \$25, and of \$25 or over, by States:

NUMBER AND PER CENT OF FAMILIES HAVING EACH SPECIFIED WEEKLY INCOME, BY STATES.

State.	Total number of families.	Number of families having each specified weekly income.				Per cent of families having each specified weekly income.			
		Under \$12.	\$12 or under \$25.	\$25 or over.	Income not reported.	Under \$12.	\$12 or under \$25.	\$25 or over.	Income not reported.
Massachusetts.....	72	10	43	18	1	13.9	59.7	25.0	1.4
Rhode Island.....	66	20	33	12	1	30.3	50.0	18.2	1.5
New York.....	112	34	62	14	2	30.3	55.4	12.5	1.8
New Jersey.....	100	14	71	9	6	14.0	71.0	9.0	6.0
Pennsylvania.....	^a 245	42	151	42	10	17.2	61.6	17.2	4.0
Maryland.....	47	17	24	5	1	36.2	51.1	10.6	2.1
North Carolina.....	53	25	28	.....	.....	47.2	52.8	.....	.....
South Carolina.....	53	26	25	.....	2	49.0	47.2	.....	3.8
Georgia.....	50	24	26	.....	.....	48.0	52.0	.....	.....
Alabama.....	17	10	6	1	.....	58.8	35.3	5.9	.....
Wisconsin.....	49	8	35	6	.....	16.3	71.4	12.3	.....
Illinois.....	^a 111	13	65	27	6	11.7	58.6	24.3	5.4
Missouri.....	^a 55	16	30	7	2	29.1	54.6	12.7	3.6

^a Not including 2 families, data not reported.

These figures show that proportionately more incomes under \$12 per week in the families of working children were reported for the four Southern States than for the other nine States, and also, except in the case of one family in Alabama, no incomes of more than \$25 per week were found in the Southern States. But it should be remembered that the cost of living is probably less in these States than in the others with which these figures deal. Boarders taken into the families reported for the Southern States and children paying board usually paid less than \$2 per week. A common charge was \$8 a month. In the Northern States and in Wisconsin and Illinois the charge for board was seldom less than \$2.50 per week; it was more often over \$3 per week.

The amount of a family's income considered without reference to the number of its members does not give an accurate idea of the economic condition of the family. An attempt is here made to show the *economic condition* of the families of working children by classifying

certain families according to the average income per member. In order that a comparison may be made between the families reported for the several States, which are nearly alike in all respects except income and number of members, only those families are considered which were paying rent for their homes, and whose working members were contributing all their earnings to the family income. These families are for convenience called normal families, and are classified according to specified incomes per member, by States, as follows. The figures are based upon the total income per family less the amount of the rent.

NUMBER AND PER CENT OF NORMAL FAMILIES HAVING EACH SPECIFIED WEEKLY INCOME PER MEMBER, BY STATES.

State.	Total number of families.	Number of normal families having each specified weekly income per member.							Per cent of normal families having each specified weekly income per member.						
		Under \$1.	\$1 or under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or over	Total.	Under \$1.	\$1 or under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or over	Total.
Massachusetts...	72	1	12	21	3	2	4	43	2.3	27.9	48.8	7.0	4.7	9.3	100
Rhode Island...	66	4	13	8	8	3	.....	36	11.1	36.1	22.2	22.2	8.4	.....	100
New York.....	112	14	34	23	16	.....	2	89	15.7	38.2	25.8	18.0	.....	2.3	100
New Jersey.....	100	4	18	27	7	4	2	62	6.5	29.0	43.5	11.3	6.5	3.2	100
Pennsylvania.....	a 245	10	52	31	29	8	1	131	7.6	39.7	23.7	22.1	6.1	.8	100
Maryland.....	47	1	16	7	1	.....	.....	25	4.0	64.0	28.0	4.0	.....	.....	100
North Carolina.....	53	.....	15	7	.....	.....	.....	22	.....	68.2	31.8	.....	.....	.....	100
South Carolina.....	53	3	15	10	3	.....	.....	31	9.7	48.4	32.2	9.7	.....	.....	100
Georgia.....	50	3	15	4	.....	.....	.....	22	13.6	68.2	18.2	.....	.....	.....	100
Alabama.....	17	3	6	1	.....	.....	.....	10	30.0	60.0	10.0	.....	.....	.....	100
Wisconsin.....	49	3	8	10	2	1	.....	24	12.5	33.3	41.7	8.3	4.2	.....	100
Illinois.....	a 111	3	18	19	11	7	3	61	4.9	29.5	31.2	18.0	11.5	4.9	100
Missouri.....	a 55	9	11	12	6	1	2	41	22.0	26.8	29.3	14.6	2.4	4.9	100

a Not including 2 families, data not reported.

The whole number of families reported for each State is entered in the first column of the table; the number of normal families considered in the succeeding columns is entered in the eighth column of figures. The percentages, which are given in the right-hand columns of the table, show that over 50 per cent of the normal families of New York, Maryland, North Carolina, South Carolina, Georgia, and Alabama were living upon incomes of less than \$2 per week per member. The four States in the list having the greatest percentages of families whose weekly incomes were \$2 or over per member are Illinois, Massachusetts, New Jersey, and Wisconsin.

The relative importance of the contributions of children under 16 years of age may be shown first by classifying families according to specified weekly incomes received from these children and from other members, including both heads of families and children over 16 years of age, and second by classifying children under 16 years of age and other members according to specified weekly contributions. The contributions of children under 16 years of age represent their entire earnings, therefore in order that the comparisons made possible by these classifications may be upon the same basis, only those members over 16 years of age who also contribute practically all their

earnings are considered, i. e., those members who pay board and lodging are excluded.

The following tables show the number and percentage of families receiving specified weekly incomes from children under 16 years of age and from members over 16 years of age not paying board and lodging, by States:

NUMBER OF FAMILIES HAVING EACH SPECIFIED WEEKLY INCOME FROM CHILDREN UNDER 16 YEARS OF AGE AND FROM MEMBERS OVER 16, BY STATES.

State.	Total number of families.	Number of families having each specified weekly income from—										
		Children under 16 years of age.					Members over 16 years of age not paying board and lodging.					
		Noth- ing.	Under \$3.	\$3 or under \$5.	\$5 or under \$8.	\$8 or over.	Noth- ing.	Under \$5.	\$5 or under \$8.	\$8 or under \$12.	\$12 or over.	Amount not re- ported.
Massachusetts	72	1	16	34	15	6	.....	6	5	24	35	2
Rhode Island	66	.....	14	31	16	5	6	6	8	13	33	.....
New York	112	2	35	59	13	3	5	11	17	26	50	3
New Jersey	100	2	16	50	17	15	1	8	14	24	50	3
Pennsylvania	a245	.....	51	100	75	19	16	16	16	78	109	10
Maryland	47	.....	20	18	8	1	1	7	13	12	13	1
North Carolina	53	.....	13	21	16	3	3	16	20	8	6	.....
South Carolina	53	.....	19	12	16	6	3	14	16	11	9	.....
Georgia	50	.....	11	25	12	2	8	14	11	12	5	.....
Alabama	17	.....	4	5	3	5	2	5	4	4	2	.....
Wisconsin	49	.....	12	34	2	1	1	2	4	11	30	1
Illinois	a111	2	16	57	34	2	3	2	8	24	67	7
Missouri	a55	.....	11	26	13	5	6	8	5	10	24	2

a Not including 2 families, data not reported.

PER CENT OF FAMILIES HAVING EACH SPECIFIED WEEKLY INCOME FROM CHILDREN UNDER 16 YEARS OF AGE AND FROM MEMBERS OVER 16, BY STATES.

State.	Per cent of families having each specified weekly income from—										
	Children under 16 years of age.					Members over 16 years of age not paying board and lodging.					
	Noth- ing.	Under \$3.	\$3 or under \$5.	\$5 or under \$8.	\$8 or over.	Noth- ing.	Under \$5.	\$5 or under \$8.	\$8 or under \$12.	\$12 or over.	Amount not re- ported.
Massachusetts.....	1.4	22.2	47.2	20.8	8.4	.....	8.3	7.0	33.3	48.6	2.8
Rhode Island.....	.....	21.2	47.0	24.2	7.6	9.1	9.1	12.1	19.7	50.0	.....
New York.....	1.8	31.2	52.7	11.6	2.7	4.5	9.8	15.2	23.2	44.6	2.7
New Jersey.....	2.0	16.0	50.0	17.0	15.0	1.0	8.0	14.0	24.0	50.0	3.0
Pennsylvania.....	.....	20.8	40.8	30.6	7.8	6.6	6.6	6.6	31.8	44.4	4.0
Maryland.....	.....	42.6	38.3	17.0	2.1	2.1	14.9	27.7	25.5	27.7	2.1
North Carolina.....	.....	24.5	39.6	30.2	5.7	5.7	30.2	37.7	15.1	11.3	.....
South Carolina.....	.....	35.9	22.6	30.2	11.3	5.7	26.4	30.2	20.7	17.0	.....
Georgia.....	.....	22.0	50.0	24.0	4.0	16.0	28.0	22.0	24.0	10.0	.....
Alabama.....	.....	23.5	29.4	17.7	29.4	11.8	29.4	23.5	23.5	11.8	.....
Wisconsin.....	.....	24.5	69.4	4.1	2.0	2.0	4.1	8.2	22.6	61.2	2.0
Illinois.....	1.8	14.4	51.4	30.6	1.8	2.7	1.8	7.2	21.6	60.4	6.3
Missouri.....	.....	20.0	47.2	23.7	9.1	10.9	14.6	9.1	18.2	43.6	3.6

By examining the percentage columns of this table it will be seen that the mean or average weekly income received from children under 16 years of age falls in the column headed "\$3 or under \$5" for each State, and that the mean income received from members over 16 years of age falls either in the column headed "\$8 or under \$12" or in the column headed "\$12 or over" for each State except North Carolina, South Carolina, Georgia, and Alabama, and that for these States it

falls in the column headed "\$5 or under \$8." Thus, while the incomes received from children average about the same in all the States, those received from members over 16 years of age average lower in the four Southern States named than in the other nine States considered, and hence those received from children are relatively greater. In determining the position of mean incomes the percentages in the columns headed "nothing" are of course not counted in. Many of the families entered as receiving nothing from members over 16 years of age were, however, receiving board from such members.

The following tables give the number and percentage of children under 16 years of age, and of members over 16 years of age not paying board, contributing specified amounts per week to the family income, by States:

NUMBER OF CHILDREN UNDER 16 YEARS OF AGE AND OF MEMBERS OVER 16 CONTRIBUTING SPECIFIED WEEKLY AMOUNTS, BY STATES.

[The total number of children in this table differs from the total shown in the tables giving the number individually reported, pp. 517-521, 532. This is because a few children were found contributing to family income who were not individually reported, and a few who were individually reported were learners or helpers and not contributing.]

State.	Total number of families.	Number of children under 16 years of age contributing weekly—				Number of members over 16 years of age not paying board and lodging but contributing weekly—				
		Total.	Under \$3.	\$3 or under \$5.	\$5 or over.	Total.	Under \$3.	\$3 or under \$5.	\$5 or over.	Amount not reported.
Massachusetts.....	72	77	16	42	19	136	4	28	107	2
Rhode Island.....	66	84	22	53	9	113	7	17	89	.....
New York.....	112	125	43	71	11	202	26	41	132	3
New Jersey.....	100	135	23	99	13	160	16	33	108	3
Pennsylvania.....	a 245	313	90	174	49	369	11	49	298	11
Maryland.....	47	69	51	17	1	88	23	31	33	1
North Carolina.....	53	98	70	28	.....	83	13	47	23	.....
South Carolina.....	53	97	70	26	1	84	14	35	35	.....
Georgia.....	50	104	86	18	.....	79	26	84	19	.....
Alabama.....	17	40	32	7	1	30	7	16	7	.....
Wisconsin.....	49	53	15	38	.....	95	6	25	63	1
Illinois.....	a 111	118	23	64	31	187	10	33	137	7
Missouri.....	a 56	70	16	45	9	79	4	24	49	2

a Not including 2 families, data not reported.

PER CENT OF CONTRIBUTING CHILDREN UNDER 16 YEARS OF AGE AND OF CONTRIBUTING MEMBERS OVER 16 WHO CONTRIBUTE EACH SPECIFIED WEEKLY AMOUNT, BY STATES.

State.	Per cent of contributing children under 16 years of age who contribute weekly—			Per cent of contributing members over 16 years of age not paying board and lodging, but who contribute weekly—			Amount not reported.
	Under \$3.	\$3 or under \$5.	\$5 or over.	Under \$3.	\$3 or under \$5.	\$5 or over.	
Massachusetts.....	20.8	54.5	24.7	2.9	16.9	78.7	1.5
Rhode Island.....	26.2	63.1	10.7	6.2	15.0	78.8	.....
New York.....	34.4	56.8	8.8	12.9	20.3	65.3	1.5
New Jersey.....	17.1	73.3	9.6	10.0	20.6	67.5	1.9
Pennsylvania.....	28.7	56.6	15.7	3.0	13.3	80.7	3.0
Maryland.....	73.9	24.6	1.5	26.2	35.2	37.5	1.1
North Carolina.....	71.4	28.6	.....	15.7	56.6	27.7	.....
South Carolina.....	72.2	26.8	1.0	16.6	41.7	41.7	.....
Georgia.....	82.7	17.3	.....	32.9	43.0	24.1	.....
Alabama.....	80.0	17.5	2.5	23.3	53.4	23.3	.....
Wisconsin.....	28.3	71.7	.....	6.3	26.3	66.3	1.1
Illinois.....	19.5	54.2	26.3	5.4	17.6	73.3	2.7
Missouri.....	22.9	61.3	12.8	5.1	30.4	62.0	2.5

By examining the percentage columns of this table the mean or average contribution of children under 16 years of age will be seen to fall in the column headed "under \$3" for the States of Maryland, North Carolina, South Carolina, Georgia, and Alabama, and in the column headed "\$3 or under \$5" for the remaining eight States, and the mean or average contribution of members over 16 years of age will be seen to fall in the column headed "\$3 or under \$5" for the five States just named, and in the column headed "\$5 or over" for the eight remaining States. Thus the individual contributions, both of the children and of the older members of the families contributing all their earnings, average less in Maryland and the four Southern States than in the other States considered. The greater relative importance of the contributions of children under 16 years of age in the four Southern States seems, therefore, to be due to the fact that more such children in each family can be put to work and thus made to contribute to the family income than in the other nine States.

The data given in the last table shows that members of the families over 16 years of age were earning on the average more per week in those States in which child labor was restricted than in those in which there was practically no restriction upon the employment of children. No data was obtained to show the extent to which this fact can be attributed to the depressing effect of unrestricted child labor upon the rates of wages. But much was seen to suggest that it may in many instances be attributed, in part at least, to the effect of the unrestricted power of the older members of the family to put children to work. Not only were fathers idle who might have found employment, but many children over 16 years of age were content with small earnings. In many instances had the older members of the family worked with greater energy the labor of many young children, at least of those under 12, might have been spared without any diminution in the family income.

No very close estimate can be made of the proportion which the contributions of the children bore to the total incomes of the families considered in these tables. It may be stated, roughly, that families in all the States were receiving amounts averaging from 20 to 40 per cent of their total incomes from children under 16 years of age. Thus these children were of considerable economic importance to their parents. With very few exceptions those reported gave up all their earnings to their parents. Frequently they were not allowed to draw their pay themselves, but the father, mother, or older brother or sister, received their envelopes. Spending money was generally given them. "We must give them something to keep them contented when they give up all they get," was said by many a mother. Usually the amount of spending money was not a fixed amount. It was merely "*what could be spared*," and depended upon circumstances. But in

Northern textile communities a definite sum, 50 cents or \$1 each week, was reported in a few cases, or a percentage of earnings or all earned over the even dollars was allowed. A few cases were found where children were allowed to keep all their earnings upon condition that they clothed themselves. Some children, as messenger boys who received tips, and glass factory boys who received fees from the blowers they served, had gains outside their regular earnings which they were generally allowed to keep. Indeed, messenger boys often acquired large amounts through tips of which the parents knew nothing.

One could not fail to observe that the effect of the economic importance of their children too often disposed parents to think of them chiefly as a source of profit to themselves. A Southern father lamented the death of his little girl because she was such a good spinner, the best "hand" he had. Many mothers complained of the laws raising the age at which children could go to work, because by reason of them and of the growing tendency of the young people to marry early or to wish to be independent of their parents, so few years were left during which parents could profit by their labor. The effect of their position in the household upon the children themselves together with the demands made on them by the nature of the work they were doing combined to shorten their childhood. They were no longer little children to be cared for by father and mother, but equal sharers with them of the burdens and responsibilities of life.

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS.

MASSACHUSETTS.

Industry.	Estab- lishment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Un- der \$2.	\$2 or un- der \$3.	\$3 or un- der \$4.	\$4 or un- der \$5.	\$5 or un- der \$6.	\$6 or un- der \$7.	\$7 or un- der \$8.	\$8 or over.
Boots and shoes	1	7	.....	7	\$6.91	\$3.50	\$4.61	.....	.....	2	4	.....	1	.....	.....
.....	2	4	.....	4	5.00	3.21	4.30	.....	.....	1	1	2	.....	.....	.....
Brushes	3	2	7	9	5.11	3.35	3.82	.....	.....	8	.....	1	.....	.....	.....
Carpets	4	85	57	142	7.07	2.92	3.85	.....	1	99	28	12	1	1	.....
Confectionery	5	.....	16	16	4.00	2.50	2.79	.....	10	5	1	.....	.....	.....	.....
Cotton and worsted goods	6	199	149	348	9.57	2.16	4.95	.....	3	7	221	79	35	1	2
Cotton goods	7	28	26	54	10.90	2.26	5.34	.....	1	8	17	13	5	6	4
.....	8	29	29	58	7.00	1.36	4.20	.....	2	5	25	11	8	6	1
.....	9	9	18	27	7.15	1.89	4.25	.....	1	2	7	11	1	4	1
.....	10	26	17	43	8.93	1.41	4.33	.....	3	3	15	11	5	2	3
.....	11	85	29	114	8.00	.99	4.22	.....	4	10	43	28	22	4	2
.....	12	37	33	70	9.98	1.82	5.27	.....	1	3	3	31	9	9	4
.....	13	84	54	138	10.39	1.50	4.85	.....	2	4	36	33	45	6	6
Department store	14	39	5	44	3.50	2.50	2.58	.....	37	7	.....	.....	.....	.....	.....
Rubber goods, boots	15	43	3	46	5.00	2.50	3.44	.....	6	25	13	2	.....	.....	.....
Woolen goods	16	.....	4	4	7.80	3.36	5.14	.....	.....	2	.....	1	.....	1	.....
.....	17	3	6	9	8.12	4.64	5.50	.....	.....	.....	6	.....	2	.....	1
Worsted goods	18	30	50	80	8.99	3.48	4.17	.....	.....	42	22	12	3	.....	1
Total		710	503	1,213	.....	.....	.....	13	85	335	441	212	78	26	23

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS—Continued.

RHODE ISLAND.

Industry.	Estab- lishment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or under \$6.	\$6 or under \$7.	\$7 or under \$8.	\$8 or over.
Bleaching cotton goods.....	19	45	10	55	\$5.67	\$3.00	\$4.16	.....	.....	13	35	7	.....	.....	.....
Clothing, hats, and shoes, retail.....	20	a 19	b 19	c 38	3.00	2.50	2.67	.....	25	13	.....	.....	.....	.....	.....
Cotton goods.....	21	40	46	86	6.44	2.00	4.14	.....	15	32	22	11	6	.....	.....
	22	10	10	20	3.60	1.60	2.60	1	15	4	.....	.....	.....	.....	.....
Cotton goods, narrow fabrics.....	23	.....	39	39	8.29	2.79	4.06	.....	3	21	7	2	2	2	2
Dyeing cotton and woolen goods.....	24	14	1	15	5.00	3.50	4.23	.....	.....	1	13	1	.....	.....	.....
Hosiery and knit goods.....	25	3	37	40	5.26	2.48	3.22	.....	9	26	4	1	.....	.....	.....
Jewelry.....	26	1	4	5	4.43	3.44	3.84	.....	.....	4	1	.....	.....	.....	.....
Soap and washing powder.....	27	28	.....	28	6.80	2.75	4.09	.....	2	19	1	4	2	.....	.....
Worsted yarns.....	28	30	39	69	6.69	2.40	3.56	.....	6	47	10	5	1	.....	.....
Total.....	.....	190	205	395	.....	.....	.....	1	75	180	93	31	11	2	2

NEW YORK.

Artificial flowers and feathers.....	29	.....	1	1	\$2.70	\$2.70	\$2.70	.....	1	.....	.....	.....	.....	.....	.....
	30	1	.....	1	3.00	3.00	3.00	.....	.....	1	.....	.....	.....	.....	.....
	31	.....	2	2	6.25	2.50	3.38	.....	1	.....	.....	.....	1	.....	.....
Artificial flowers, materials for.....	32	14	.....	14	5.00	3.00	3.91	.....	.....	6	6	2	.....	.....	.....
Blank books.....	33	3	9	12	5.76	2.78	3.82	.....	3	6	1	2	.....	.....	.....
Carpets.....	34	15	36	51	7.50	3.50	3.85	.....	.....	38	8	4	.....	1	.....
Coffee cleaning.....	35	4	17	21	3.50	2.50	2.76	.....	11	10	.....	.....	.....	.....	.....
Confectionery.....	36	.....	47	47	3.75	2.75	3.26	.....	2	45	.....	.....	.....	.....	.....
	37	.....	7	7	3.54	3.00	3.08	.....	.....	7	.....	.....	.....	.....	.....
Cooperage.....	38	.....	46	46	5.00	3.50	4.12	.....	.....	2	38	6	.....	.....	.....
Cordage, twine, etc.....	39	9	11	20	6.00	3.00	4.17	.....	.....	11	5	1	3	.....	.....
Cotton goods.....	40	7	2	9	4.50	1.80	3.72	1	.....	5	3	.....	.....	.....	.....
	41	72	48	120	6.25	2.40	4.09	.....	10	42	46	17	5	.....	.....
Department store.....	42	141	13	154	4.50	2.50	3.08	.....	1	147	6	.....	.....	.....	.....
	43	1	14	15	4.00	2.50	2.92	.....	10	3	2	.....	.....	.....	.....
	44	2	5	7	3.50	2.50	3.00	.....	1	6	.....	.....	.....	.....	.....
	45	9	72	81	5.00	2.25	2.66	.....	49	26	5	1	.....	.....	.....
Dress trimmings, embroidery, etc.....	46	5	20	25	4.87	3.00	3.56	.....	.....	17	8	.....	.....	.....	.....
Drugs, wholesale.....	47	33	.....	33	4.00	3.00	3.12	.....	.....	29	4	.....	.....	.....	.....
Dry goods.....	48	92	61	153	6.00	2.50	3.10	.....	24	112	14	2	1	.....	.....
Handkerchiefs.....	49	.....	55	55	5.86	1.80	3.26	3	22	15	7	8	.....	.....	.....
Knit goods.....	50	5	3	8	5.70	3.75	4.60	.....	.....	2	4	2	.....	.....	.....
	51	4	11	15	6.75	2.50	4.10	.....	1	9	2	1	2	.....	.....
Laundry.....	52	1	34	35	3.75	3.00	3.40	.....	.....	35	.....	.....	.....	.....	.....
Men's furnishings.....	53	2	3	5	4.00	3.00	3.20	.....	.....	4	1	.....	.....	.....	.....
Men's furnishings and laundry.....	54	1	22	23	6.70	2.95	4.54	.....	7	4	2	5	5	.....	.....
	55	22	60	82	7.82	3.00	3.42	.....	.....	66	12	2	1	1	.....
	56	2	6	8	4.00	2.71	3.39	.....	2	4	2	.....	.....	.....	.....
Paper boxes, bags, envelopes, etc.....	57	13	26	39	4.50	2.00	2.73	.....	26	11	2	.....	.....	.....	.....
Pearl buttons.....	58	1	5	6	7.25	3.00	5.04	.....	.....	1	2	.....	1	1	.....
Pianoforte actions.....	59	21	.....	21	5.00	3.00	3.60	.....	.....	15	5	1	.....	.....	.....
Tailoring.....	60	1	1	2	5.50	5.00	5.25	.....	.....	.....	.....	2	.....	.....	.....
Underwear and bedding.....	61	.....	14	14	3.00	2.50	2.78	.....	7	7	.....	.....	.....	.....	.....
Wall paper.....	62	10	2	12	6.00	3.50	4.58	.....	.....	3	4	3	2	.....	.....
Women's belts and skirt bindings.....	63	.....	19	19	5.14	3.00	3.30	.....	.....	16	2	1	.....	.....	.....
Women's neckwear, laces, etc.....	64	1	11	12	4.00	2.50	3.15	.....	2	8	2	.....	.....	.....	.....
Total.....	.....	538	637	1,175	.....	.....	.....	4	180	713	193	61	21	3	.....

a Not including 42 persons working Saturdays only at 50 cents per day, and 13 persons working Saturdays only at from 75 cents to \$1 per day.

b Not including 57 persons working Saturdays only at 50 cents per day, and 12 persons working Saturdays only at from 75 cents to \$1 per day.

c Not including 79 persons working Saturdays only at 50 cents per day, and 25 persons working Saturdays only at from 75 cents to \$1 per day.

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS—Continued.

NEW JERSEY.

Industry.	Estab- lish- ment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or under \$6.	\$6 or under \$7.	\$7 or under \$8.	\$8 or over.
Bakery, cracker....	65	22		22	\$4.00	\$2.50	\$2.84		13	7	2				
Cigars.....	66	2	126	128	9.00	2.00	3.19		74	30	14	8		1	1
Electric wire and cable.....	67	7	5	12	6.00	2.50	4.78		1	1	1	8	1		
Electric wire and cable, clerical force.....	68	11		11	3.00	3.00	3.00			11					
Electrical supplies..	69	47	8	55	5.16	3.00	3.53			41	12	2			
Glass bottles.....	70	52		52	11.14	3.00	3.75			43	3		2		4
	71	80		80	4.50	3.48	3.62			79	1				
	72	92		92	5.35	2.82	3.64		10	73	8	1			
Glass bottles and druggists' special- ties.....	73	111		111	4.50	2.76	3.27		45	64	2				
Glass bottles and window glass....	74	91		91	3.42	3.42	3.42			91					
Hat bands.....	75	2	2	4	4.40	3.40	3.90			3	1				
Linen thread, twine, and yarns.....	76	43	83	126	6.55	2.50	4.18		4	55	26	39	2		
Paper boxes.....	77	8	5	13	4.14	3.00	3.31			10	3				
Pottery.....	78	10	7	17	4.16	1.00	3.16	1	3	9	4				
	79	14	3	17	6.83	2.50	3.94		2	4	9		2		
Silk finishing and dyeing.....	80	2	2	4	3.00	2.00	2.63		2	2					
Silk goods, broad..	81	2	2	4	6.33	3.30	4.41			1	2		1		
	82	6	5	11	3.35	2.88	3.09		6	5					
Silk goods, broad and ribbon.....	83	13	64	a 77	5.00	2.50	3.58		13	29	24	8			
Silk goods, thrown	84	20	6	26	5.00	1.50	3.32	3	4	10	7	2			
	85	3	4	7	5.00	1.00	3.00	3		2	1	1			
	86	22	9	31	4.00	2.00	2.68		19	8	4				
Soap.....	87	51		51	7.57	3.00	3.82			36	3	7	2	3	
Thread, cotton....	88	72	103	175	6.00	2.30	3.32		25	119	19	7	4		
Total.....		783	434	a 1,217				7	222	783	146	83	14	4	5

PENNSYLVANIA.

Artificial flowers...	89		11	a 11	\$3.41	\$1.50	\$2.61	2	3	3					
Cigars.....	90	4	331	b 335	4.50	2.00	2.38		68	14	3				
	91		27	27	7.80	1.80	4.97	1	2	4	7	4	6	3	
Coal breakers.....	92	48		48	8.64	2.97	4.89		9	6	12	11	6	2	2
	93	52		52	5.40	2.97	3.97		3	22	23	4			
	94	16		16	5.13	2.20	2.93		13	1	1	1			
	95	40		40	7.29	3.24	4.07			24	7	7	1	1	
	96	8		8	4.37	2.93	3.47		5		3				
	97	34		34	6.60	3.96	4.18			22	11		1		
	98	34		34	4.32	3.72	4.02			17	17				
	99	57		57	5.15	2.52	3.10		37	13	2	5			
	100	66		66	5.64	3.30	4.26			26	34	6			
	101	44		44	5.13	3.24	3.84			36		8			
	102	21		21	4.56	2.88	3.30		9	9	3				
	103	65		65	6.60	3.30	4.94			6	28	30	1		
	104	36		36	3.66	1.74	2.28	13	21	2					
Confectionery.....	105	12	48	60	6.00	2.50	3.41		1	48	5	4	2		
Corks.....	106	57	25	c 82	11.65	2.48	4.42		21	20	15	5	16	1	3
Cotton and woolen goods.....	107	43	11	a 54	6.50	3.00	3.73			36	12	2	1		
	108	6	8	14	4.50	3.00	3.61			8	6				
Department store...	109	13	440	453	7.00	2.50	3.00		249	138	46	14	4	2	
	110	76	69	145	5.00	2.50	2.81		96	37	11	1			
	111	262	29	291	4.50	2.00	2.83		155	114	22				
Glass bottles, etc..	112	d 90		d 90	4.80	3.60	3.96			21	69				
Glass tableware, etc.	113	240	65	c 305	9.30	3.00	4.56			76	147	66	12	1	2
Hosiery.....	114	29	92	e 121	6.00	3.00	3.50			45	17	1			
Iron and steel.....	115	f 27		f 27	8.48	3.60	6.09			1	10	12	2	1	1

a Including 3 persons, earnings not reported.

b Including 250 persons, earnings not reported.

c Including 1 person, earnings not reported.

d Not including 1 person working Saturdays only, at 60 cents per day.

e Including 54 persons, earnings not reported.

f Not including 2 persons working Saturdays only at 7½ cents per hour.

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS—Continued.

PENNSYLVANIA—Concluded.

Industry.	Est- ab- lish- ment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or under \$6.	\$6 or under \$7.	\$7 or under \$8.	\$8 or over.
Iron and steel	116	27	23	a 50	\$7.50	\$2.99	\$4.82	....	1	10	14	17	3	3	....
Lace goods, tapes- try, etc.	117	6	16	22	8.71	2.31	4.52	....	2	7	4	5	2	1	1
	118	4	25	b 29	3.00	3.00	3.00	....	....	5	....	....	....	....	....
	119	3	18	c 21	6.00	3.00	4.69	....	....	1	6	....	2	....	....
Leather and leath- er goods, gloves ..	120	62	2	d 64	11.06	3.24	4.85	....	....	11	24	10	16	....	2
Pickles, preserves, etc.	121	16	65	81	5.05	2.70	3.55	....	3	60	16	2	....	....	....
Shipbuilding	122	185	....	185	6.00	2.50	4.91	....	12	13	51	21	18	....	....
Silk goods, thrown ..	123	11	33	44	4.50	1.50	2.48	11	20	12	1	....	....	....	....
	124	4	24	28	3.75	2.00	2.68	....	18	10	1	....	....	....	....
	125	1	72	73	4.25	2.25	3.26	....	6	66	1	....	....	....	....
Silk goods, thrown and broad	126	17	69	d 86	6.11	1.50	3.06	6	34	28	13	1	3	....	....
	127	20	488	508	5.50	2.00	3.12	145	331	20	2	....	....	....	....
Structural iron	128	105	....	105	10.80	4.50	5.66	....	....	39	34	24	3	5	....
	129	136	....	136	12.96	2.77	5.07	....	1	38	53	15	9	9	11
	130	185	1	186	10.38	2.77	5.68	....	8	6	63	44	26	16	23
Woolen and worsted goods	131	54	64	118	6.00	2.50	3.45	....	19	67	23	8	1	....	....
Woolen and worsted yarns	132	7	24	31	4.00	2.50	3.13	....	12	14	5	....	....	....	....
	133	20	63	83	6.00	3.00	4.08	....	....	48	10	22	3	....	....
Total		2,243	2,143	e 4,386	....	....	....	33	973	1,486	853	362	233	43	50

MARYLAND.

Cigars and cigarettes	134	1	104	f 105	\$8.30	\$1.50	\$3.57	3	28	31	15	11	2	....	1
Clothing furnish- ings	135	2	7	9	5.00	2.26	3.19	....	3	5	....	1	....	....	....
	136	3	19	22	4.68	1.50	2.25	7	13	1	1	....	....	....	....
Cotton duck, twine, and rope	137	49	44	93	4.62	1.85	2.53	9	59	21	4	....	....	....	....
	138	13	11	24	4.20	1.20	2.04	17	2	4	1	....	....	....	....
Department store ..	139	6	56	62	2.00	1.50	1.70	37	25	....	....	....	....	....	....
Glass bottles	140	8	....	84	3.45	2.15	2.47	....	82	2	....	....	....	....	....
	141	39	2	41	4.00	2.52	2.93	....	19	21	1	....	....	....	....
Men's clothing and furnishings	142	39	296	325	6.50	1.25	2.61	58	171	58	28	9	1	....	....
Tobacco	143	1	3	4	3.88	3.24	3.59	....	....	4	....	....	....	....	....
	144	50	19	69	4.35	2.36	2.92	....	50	17	2	....	....	....	....
Total		287	551	f 838	....	....	....	131	452	164	52	21	3	....	1

NORTH CAROLINA.

Cordage, yarn, etc.	145	9	7	16	\$3.60	\$1.80	\$2.55	3	9	4	....	....	....	....	....
Cotton goods	146	19	10	29	3.73	1.15	2.55	3	18	8	....	....	....	....	....
	147	68	57	125	6.40	1.20	2.69	21	61	32	7	....	1	....	....
	148	26	29	55	5.81	1.44	2.85	4	29	19	2	1	....	....	....
	149	23	25	48	4.50	.90	2.76	11	13	21	3	....	....	....	....
	150	8	23	31	5.35	1.80	3.03	8	4	16	2	1	....	....	....
Cotton yarns	151	24	22	46	4.82	1.20	2.17	17	25	3	1	1	....	....	....
	152	15	16	31	5.04	1.50	3.38	2	10	7	11	1	....	....	....
	153	27	17	44	4.52	1.41	2.78	9	21	9	5	....	....	....	....
Furniture	154	8	....	8	4.20	1.20	2.29	5	....	2	1	....	....	....	....
	155	2	....	2	2.50	2.50	2.50	....	2	....	....	....	....	....	....
	156	17	....	17	4.65	1.40	2.93	5	4	5	3	....	....	....	....
Men's clothing	157	2	3	5	2.70	1.50	1.92	3	2	....	....	....	....	....	....
Tobacco	158	366	232	g 618	6.63	1.20	2.97	17	130	139	21	6	1	....	....
Total		614	461	g 1,075	....	....	....	106	331	265	56	8	2	....	....

a Including 2 persons, earnings not reported.

b Including 24 persons, earnings not reported.

c Including 13 persons, earnings not reported.

d Including 1 person, earnings not reported.

e Including 353 persons, earnings not reported.

f Including 14 persons, earnings not reported.

g Including 306 persons, earnings not reported.

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS—Continued.

SOUTH CAROLINA.

Industry.	Estab- lish- ment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Under \$2.	\$2 or under \$3.	\$3 or under \$4.	\$4 or under \$5.	\$5 or under \$6.	\$6 or under \$7.	\$7 or under \$8.	\$8 or over.
Cotton goods.....	159	48	40	88	\$3.90	\$0.60	\$2.29	33	36	19	...	...	...	...	...
	160	18	19	37	5.40	1.49	2.48	10	17	7	2	1	...	...	...
	161	96	49	145	5.76	.90	2.80	23	52	64	3	3	...	...	...
	162	53	60	103	4.15	1.20	2.45	22	59	21	1	...	...	...	...
	163	20	19	39	5.78	.90	2.81	8	16	9	5	1	...	...	...
	164	68	87	a 155	5.97	.96	3.17	19	37	72	23	1	1	...	...
	165	90	78	168	5.39	.60	2.39	52	78	36	1	1	...	...	...
	166	38	26	64	4.79	1.16	2.26	20	39	4	1	...	...	...	...
Cotton yarns.....	167	17	14	31	3.60	1.44	2.34	8	20	3	...	...	...	...	...
Total.....	.....	448	382	a 830	.....	.....	.....	195	354	235	36	9	...	...	...

GEORGIA.

Cotton and woolen goods.....	168	20	7	27	\$3.85	\$1.45	\$2.48	9	8	10	...	...	...	...	...
Cotton goods.....	169	39	47	86	4.64	1.15	2.72	16	21	47	2	...	...	...	...
	170	b 34	29	c 63	5.51	1.32	2.89	4	33	18	5	1	...	...	...
	171	11	5	d 16	4.61	2.00	3.03	...	8	3	3	...	...	...	...
	172	79	84	a 163	7.27	1.38	3.42	7	33	84	27	8	2	1	...
	173	16	31	47	8.36	1.14	3.44	7	13	14	6	1	4	1	1
	174	144	116	e 260	5.90	.64	2.81	64	77	93	17	8	...	...	...
	175	8	14	d 22	3.00	1.20	2.11	8	9	3	...	...	...	...	...
	176	18	16	34	4.50	.60	1.70	26	5	2	1	...	...	...	...
	177	138	139	277	6.91	.60	2.45	105	86	61	20	4	1	...	...
Cotton goods, bags, and bleaching....	178	f 107	g 84	h 191	7.21	1.20	3.00	27	40	99	17	2	1	1	...
Cotton yarns.....	179	6	1	7	4.20	2.40	3.34	...	1	5	1	...	...	...	...
Furniture.....	180	5	...	5	2.10	1.50	1.86	2	3	...	...	...	...	...	...
Men's clothing.....	181	9	10	19	4.00	1.84	3.17	2	2	14	1	...	...	...	...
Paper bags, wrap- ping paper, etc....	182	.....	13	13	3.77	1.93	2.71	3	7	3	...	...	...	...	...
Total.....	.....	634	596	i 1,230	.....	.....	.....	280	346	456	100	24	8	3	1

ALABAMA.

Cotton goods.....	183	54	59	113	\$5.72	\$0.55	\$2.13	15	39	22	...	1	...	...	...
Cotton yarns.....	184	13	15	28	3.00	1.20	2.14	14	5	9	...	...	...	...	...
	185	25	24	j 49	4.80	.63	2.14	24	15	7	3	...	...	...	...
Knit goods.....	186	10	23	33	4.20	.90	1.99	22	7	3	1	...	...	...	...
Total.....	.....	102	121	j 223	.....	.....	.....	111	66	41	4	1	...	...	...

WISCONSIN.

Brewing, bottling department.....	187	195	52	247	\$7.80	\$3.00	\$5.73	.....	.....	75	32	12	52	76	...
	188	117	42	159	5.50	3.00	3.98	.....	.....	67	73	19	...	...	...
Confectionery.....	189	.....	32	32	4.00	2.50	2.74	...	23	8	1	...	...	...	...
Department store....	190	6	33	39	4.00	2.00	2.32	...	32	4	3	...	...	...	...
Paper boxes.....	191	20	120	140	4.25	2.50	3.11	...	64	63	23	...	...	...	...
Tobacco.....	192	28	9	37	8.44	.96	4.15	5	4	5	11	6	4	1	1
Total.....	.....	366	288	654	.....	.....	.....	5	113	222	143	37	56	77	1

a Including 1 person, earnings not reported.

b Not including 6 persons working only on Saturdays, holidays, etc., at from 40 to 50 cents per day.

c Including 2 persons receiving no pay, but not including 6 persons working only on Saturdays, etc.

d Including 2 persons, earnings not reported.

e Including 1 person receiving no pay.

f Not including 6 persons employed after school, Saturdays, etc., at various rates.

g Not including 5 persons employed after school, Saturdays, etc., at various rates.

h Not including 11 persons employed after school, Saturdays, etc., at various rates, but including 4 persons, earnings not reported.

i Including 3 persons receiving no pay, and 5 persons, earnings not reported.

j Including 1 person working half time.

TABLE I.—WEEKLY EARNINGS OF CHILDREN UNDER 16 YEARS OF AGE, BY INDUSTRIES AND ESTABLISHMENTS—Concluded.

ILLINOIS.

Industry.	Es- tab- lish- ment No.	Children under 16 years of age.			Earnings per week.			Number earning per week—							
		Male.	Fe- male.	Total.	High- est.	Low- est.	Aver- age.	Under \$2.	\$2 or un- der \$3.	\$3 or un- der \$4.	\$4 or un- der \$5.	\$5 or un- der \$6.	\$6 or un- der \$7.	\$7 or un- der \$8.	\$8 or over.
Agricultural imple- ments, harvest- ing machinery...	193	212	.....	212	\$8.92	\$2.08	\$4.90	.....	9	59	52	48	23	17	4
Bakery.....	194	44	161	205	6.96	3.00	4.07	.....	.....	75	97	26	7	.....	.....
Confectionery.....	195	5	91	96	4.25	2.50	3.22	.....	19	67	10	.....	.....	.....	.....
Department store...	196	59	172	231	4.00	2.25	2.58	.....	196	16	19	.....	.....	.....	.....
	197	252	23	275	5.00	2.50	3.18	.....	99	114	57	5	.....	.....	.....
	198	65	19	84	5.00	2.50	3.39	.....	17	38	26	3	.....	.....	.....
Department store, manufacturing department.....	199	14	96	110	5.00	2.50	3.13	.....	18	78	8	2	.....	.....	.....
Dress and cloak trimmings.....	200	5	14	19	6.50	2.75	3.86	.....	1	10	5	1	2	.....	.....
Meat packing.....	201	139	13	152	11.16	3.00	5.24	.....	.....	21	78	2	28	13	10
	202	76	10	86	10.50	2.50	5.45	.....	1	6	30	3	31	13	2
Meat packing, cler- ical force.....	203	40	.....	40	6.00	4.00	4.58	.....	.....	.....	84	5	1	.....	.....
Rubber goods.....	204	.....	18	18	6.64	2.70	3.80	.....	5	8	2	2	1	.....	.....
Tin cans.....	205	33	12	45	4.60	3.45	4.03	.....	.....	26	19	.....	.....	.....	.....
Twine.....	206	20	15	35	7.50	2.98	5.20	.....	1	3	13	12	1	5	.....
Total.....		964	644	1,608	.....	.....	.....	.....	366	521	450	109	94	48	16

MISSOURI.

Boots and shoes....	207	87	46	b 133	\$7.97	\$2.50	\$3.85	.....	9	65	34	17	4	2	.....
	208	103	88	191	7.00	2.00	3.16	.....	46	82	40	12	10	1	.....
Brewing.....	209	130	91	221	3.96	3.00	3.31	.....	.....	221	.....	.....	.....	.....	.....
Department store....	210	24	34	58	3.00	2.00	2.26	.....	53	5	.....	.....	.....	.....	.....
	211	18	13	31	3.50	1.75	2.77	.....	2	12	17	.....	.....	.....	.....
	212	13	68	81	3.50	2.00	2.62	.....	36	45	.....	.....	.....	.....	.....
Tobacco.....	213	132	49	c 181	6.00	3.50	4.87	.....	.....	4	38	78	9	.....	.....
Wooden boxes.....	214	33	.....	33	5.00	3.00	3.48	.....	.....	21	11	1	.....	.....	.....
	215	84	.....	84	5.00	4.00	4.17	.....	.....	.....	70	14	.....	.....	.....
Total.....		624	389	1,013	.....	.....	.....	.....	2	156	460	193	122	23	3

a Including 2 persons, earnings not reported; and 2 persons receiving no pay.

b Including 2 persons, earnings not reported.

c Including 52 persons, earnings not reported.

d Including 54 persons, earnings not reported.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY.

MASSACHUSETTS.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

BOOTS AND SHOES—ESTABLISHMENTS 1 AND 2.

Males: *Chore boys*, cleaner, dinker, heeler's helper, scalloper's helpers, tier-up, welter.

BRUSHES—ESTABLISHMENT 3.

Males: Errand boys.

Females: Brush makers, *polishers*.

CARPETS—ESTABLISHMENT 4.

Males: Card cutter, card feeder, card tenders, *creelers*, errand boy, feeding preparer in card room, slasher tender, spool boys, tier-in.

Females: *Doffers*, helpers in threading room, *spinners*, *threaders*, *twisters*, *winders*.

CONFECTIONERY—ESTABLISHMENT 5.

Females: Chocolate dipper, *machine girls*, packers, wrapper and packer.

COTTON AND WORSTED GOODS—ESTABLISHMENT 6.

Males: *Back tenders on mules*, ball winders, band boys, *bobbins setters*, cleaners, *doffers*, drawing frame tenders, filling boys, filling steamer, harness brusher, harness stringer and cleaner, *helpers in bleachery*, helpers in card room, helpers in cloth room, *helpers in drying room*, helper in dyeing room, helper in engraving room, helper in packing room, helpers in preparing room, helpers in printing room, helpers in starch room, label paster, marker in packing room, piecer, roving

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

MASSACHUSETTS—Concluded.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

COTTON AND WORSTED GOODS—ESTABLISHMENT 6—concluded.

boys, sewers, shearers, spinners, spooler, sweeper, swing boy in drying room, twister-in, warpers, watchman, wool sorter.

Females: *Bobbin setters*, cleaners, *doffers*, drawers-in, drawing frame tender, filling winders, gill box tender, harness stringers and cleaners, knotters in cloth room, sample card makers, scrubbers, shearers, *spinners*, spoolers, spooler and cleaner, sweepers, trimmers, twisters, warpers' helpers, weaver.

COTTON GOODS—ESTABLISHMENTS 7 TO 13, INCLUSIVE.

Males: *Back tenders on mules*, chain builder, cleaners, cleaner and sweeper, *doffers*, drawing frame tender, errand boy, folding machine tender, general helper, harness mender, helpers in folding room, loom cleaner, office boy, ollers, ribbon tender, roving boys, roving carriers, sewer in cloth room, slasher tenders' helper and sweeper, sliver tender, *spinners*, spool carrier, *sweepers*, sweeper and bobbin boy, *tubers*, tuber and sweeper, waste machine operator, *weavers*, yarn carrier.

Females: Cleaner, cloth inspectors, combor tenders, cone winders, *doffers*, drawers-in, drawing frame tender, general helpers, harness brusher, harness hands, quillers, sewer in cloth room, speeder tenders, *spinners*, spoolers, sweepers, *weavers*.

DEPARTMENT STORE—ESTABLISHMENT 14.

Males: Bundle boys, *cash boys*, delivery boy, errand boys, examiner, stock boy.

Females: Bundle girls, *cash girl*, examiners.

RUBBER GOODS, BOOTS—ESTABLISHMENT 15.

Males: Bookers of soles, *calendriers'* helpers, *carriers*, *chore boys*, cloth winder, cutters, cutting machine operator, heel shankers, heel trimmer, helpers in cutting department, office boys, sorter, stripper in sole department.

Females: Helper in packing department, markers and strap makers.

WOOLEN GOODS—ESTABLISHMENTS 16 AND 17.

Males: *Back tenders on mules*, spinner.

Females: Bobbin winders, burlers, handers-in, spooler, warp spool winders.

WORSTED GOODS—ESTABLISHMENT 18.

Males: Balling-head tenders, band boys, card tenders, chain builder, *doffers*, *filling cabin boys*, filling winder, gill-box tender, *rail setters*, roving carriers, yarn carriers.

Females: Boss *doffers*, *doffers*, doublers, *handers-in*, spinners, spoolers, twister, warper.

RHODE ISLAND.

BLEACHING COTTON GOODS—ESTABLISHMENT 19.

Males: *Bleach house hands*, *book-fold knotters*, *cloth guiders on drying cans*, errand boy, lap shakers, sewer, stenciler.

Females: *Book-fold knotters*, yarding machine operator.

CLOTHING, HATS, AND SHOES, RETAIL—ESTABLISHMENT 20.

Males: *Cash boys*, errand boy, examiners, sales boys.

Females: *Cash girls*, sales girls.

COTTON GOODS—ESTABLISHMENTS 21 AND 22.

Males: *Back tenders on mules*, band boy and spare hand, bobbin boys, can boy, card cleaners and sweepers, *doffers*, loom cleaners, mule frame cleaners, office boy, *ring frame cleaners*, spinner, sweepers, tubers.

Females: *Doffers*, speeder tenders, *spinners*, *sweepers*, tiers-in.

COTTON GOODS, NARROW FABRICS—ESTABLISHMENT 23.

Females: Drawers-in, eyelet stamper, packers and tiers, spooler, *sweepers*, tape examiner, tiers and markers, *tipplers*, *trimmers*, weaver, winders.

DYEING COTTON AND WOOLEN GOODS—ESTABLISHMENT 24.

Males: Bleaching room hands, board paperer in finishing department, cloth guiders on calendaring machine, cloth guiders on drying cans, cloth winders, office boy.

Females: Bander.

HOSIERY AND KNIT GOODS—ESTABLISHMENT 25.

Males: Turners.

Females: *Chore girls*, *toppers*.

JEWELRY—ESTABLISHMENT 26.

Males: Messenger boy.

Females: Carder, setters-up and chargers, solderer.

SOAP AND WASHING POWDER—ESTABLISHMENT 27.

Males: Elevator boy, *fillers*, nail setters on nailing machine, wrappers.

WORSTED YARNS—ESTABLISHMENT 28.

Males: Baller, bobbin boy, bobbin setters, boss *doffer*, brush maker, *doffers*, machinist's apprentice, office boy, spinner, yarn carriers.

Females: Bobbin setters, *doffers*, spinners, twisters, winders.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

NEW YORK.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

ARTIFICIAL FLOWERS AND FEATHERS—ESTABLISHMENTS 29, 30, AND 31.

Males: Flower-worker's helper.

Females: Bundler and errand girl, flower worker, flower-worker's helper.

ARTIFICIAL FLOWERS, MATERIALS FOR—ESTABLISHMENT 32.

Males: *Bundlers*, dipper, mold spinners, thread cutters, thread spanners.

BLANK BOOKS—ESTABLISHMENT 33.

Males: Chore boy, pasters.

Females: *Scissors*, labbers, varnisher and counter.

CARPETS—ESTABLISHMENT 34.

Males: Bobbin boys, breaking-machine operators, *doffers*, oilers, sweepers.

Females: Baller, breaking-machine operators, cop winder, *doffers*, *hankers*, layers, spinners, winders.

COFFEE CLEANING—ESTABLISHMENT 35.

Males: Pickers.

Females: Pickers.

CONFECTIONERY—ESTABLISHMENTS 36 AND 37.

Females: Date opener, *labelers*, *packers*, tray carriers, *wrappers*.

COOPERAGE—ESTABLISHMENT 38.

Males: Barrel finisher, *barrel rollers*, hoop nailers, hoop rounder, nail sorter, string boys, tally boy.

CORDAGE, TWINE, ETC.—ESTABLISHMENT 39.

Males: Bobbin boy, card boys, *truck boys*.

Females: *Doffers*.

COTTON GOODS—ESTABLISHMENTS 40 AND 41.

Males: *Back tenders on mules*, carder, cleaners, *doffers*, doubling-machine tender, harness cleaners, oilers, railway hands, roller coverer's assistant, roving carriers, spinners, spool carrier, spooler, sweeper and errand boy, twistlers-in, tubers, weavers, yarn carrier.

Females: Cloth inspector, *doffers*, drawers-in, drawing frame tenders, ring spinners, *spinnners*, *spoolers*, sweepers, twister, weavers.

DEPARTMENT STORE—ESTABLISHMENTS 42, 43, 44, AND 45.

Males: Assistant bookkeepers, bundle boys, *cash boys*, errand boys, office boy, slip sorters in auditing department, stock boys, truck boy.

Females: Adding-machine operators, *bundle girls*, *cash girls*, cloakroom girl, errand girls, helper in millinery department, sales girls, sales and cash girls, slip sorters in auditing department, stock girls.

DRESS TRIMMINGS, EMBROIDERY, ETC.—ESTABLISHMENT 46.

Males: Braiding-machine cleaner, braiding-machine operators, office boys.

Females: Braiding-machine operators, clerk, embroidery-frame operator, embroidery-frame watchers, *errand girls*, general helpers, menders, packer, ribbon winders, sample-card maker, sewing-machine operator, spooler, tipper.

DRUGS, WHOLESALE—ESTABLISHMENT 47.

Males: *Bottle filler*, clerks, copyists, *errand boys*, *mail carrier* and errand boy, packer, unpackers, *weighers*.

DRY GOODS—ESTABLISHMENT 48.

Males: Cash boys.

Females: Cash girls.

HANDKERCHIEFS—ESTABLISHMENT 49.

Females: Bobbin winders' helpers, folders, *helpers in finishing room*, mangle feeder, *sewing machine operators*, tearers, trimmers.

KNIT GOODS—ESTABLISHMENTS 50 AND 51.

Males: Brushers, general helper, spinner, spooler, sweeper.

Females: Buttoners, errand girl in finishing department, tiers, *trimmers*, turners.

LAUNDRY—ESTABLISHMENT 52.

Males: Office boy.

Females: Bundle tier, collar shaper, *dampeners*, ironing machine feeders, *pullers*, work distributors.

MEN'S FURNISHINGS—ESTABLISHMENT 53.

Males: Tab turners.

Females: Assistant overseer, buttonhole maker, hem turner.

MEN'S FURNISHINGS AND LAUNDRY—ESTABLISHMENTS 54 AND 55.

Males: Belt boy, box closer, counter, errand boy, office boy, sorters, stringers, tab turner, work distributor.

Females: Bundle makers, *bundlers*, buttonhole trimmers, collar straighteners, *dampeners*, dampening machine feeder, edge ironers, errand girl, examiner of mended work, examiners, *garment turners*, general helpers, pasters, *presser*, *seam dampeners*, *seam turners*, shapers, sorters, *stampers*, tab steamer, tab turners, tip ironers, turner in box department.

PAPER BOXES—ESTABLISHMENT 56.

Males: Wagon boys.

Females: *Edge turners*.

PAPER BOXES, BAGS, ENVELOPES, ETC.—ESTABLISHMENT 57.

Males: Chore boys, counters, errand boys, paper straightener, printing and card cutting machine operator, sweepers, time card keeper, wagon boy.

Females: Box nester, *counters*, *creasers*, duster, isinglass stripper, labeler, metal bender on cigarette cases, opener, piler, putters-in of tin fasteners, rubber in embossing department, *stampers* of tin fasteners, tassel tier.

PEARL BUTTONS—ESTABLISHMENT 58.

Males: Chuck cleaner and errand boy.

Females: *Circle*s, labeler.

PIANOFORTE ACTIONS—ESTABLISHMENT 59.

Males: Clamper wiper, flanch pinners, flanch springer, *flanch stringers*, gluers, hammer wiper, rail pinner, straight tubers, string pointer, tongue stringer.

TAILORING—ESTABLISHMENT 60.

Males: Errand boy.

Females: Baster.

UNDERWEAR AND BEDDING—ESTABLISHMENT 61.

Females: Errand girls, labelers, *pillowcase folders*, ruffle maker, thread drawer on pillowcases.

WALL PAPER—ESTABLISHMENT 62.

Males: *Back tenders on printing machine*, bundle marker, stick placer.

Females: Reeler on band machine, roll lapper.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

NEW YORK—Concluded.

[The occupations in each industry at which a comparatively large number of children were employed are printed in *italics*; those at which only one child was employed are shown in the singular number.]

WOMEN'S BELTS AND SKIRT BINDINGS—ESTABLISHMENT 63.

Females: Coil pinner, cutter and trimmer, errand girls, labelers, label stamper, reeler, *sewing machine operators' helpers*, stock clerk, telephone operator.

WOMEN'S NECKWEAR, LACES, ETC.—ESTABLISHMENT 64.

Males: Office boy.
Females: Floor or errand girls.

NEW JERSEY.

BAKERY, CRACKER—ESTABLISHMENT 65.

Males: Cracker machine operators' helpers.

CIGARS—ESTABLISHMENT 66.

Males: Box opener, stock boy.
Females: Banders and labelers, *bunch makers*, *cigar rollers*, labelers, packers, *strippers*.

ELECTRIC WIRE AND CABLE—ESTABLISHMENT 67.

Males: Bobbin carriers, cotton spooler, messenger boys, winding machine operator, wire spooler.
Females: Cotton spoolers, wire guider on insulating machine, wire insulating machine operator, wire wrapping machine operator.

ELECTRIC WIRE AND CABLE, CLERICAL FORCE—ESTABLISHMENT 68.

Males: Messengers.

ELECTRICAL SUPPLIES—ESTABLISHMENT 69.

Males: *Assemblers*, battery sealers, edge trimmer of zinc cups, errand boys, *general helpers*, nut threader, paper cup bottomer, screw threading machine operator, stock boys, storeroom boy, taper and threader, wrapper, zinc cup knurler.
Females: Battery relay winder, coil coverer, general helper, *magnet winders*.

GLASS BOTTLES—ESTABLISHMENTS 70, 71, AND 72.

Males: Blowers' apprentices, carriers-in, *mold shutters*, *mold shutters and snappers-up*, *snappers-up*.

GLASS BOTTLES AND DRUGGISTS' SPECIALTIES—ESTABLISHMENT 73.

Males: Blow boys, *carriers-in*, file boys, knockers-off, *mold shutters*, *snappers-up*.

GLASS BOTTLES AND WINDOW GLASS—ESTABLISHMENT 74.

Males: Carriers-in, *mold shutters and snappers-up*.

HAT BANDS—ESTABLISHMENT 75.

Males: Singeing machine operator, weaver's helper and errand boy.
Females: Quill winder, ribbon picker.

LINEN THREAD, TWINE, AND YARNS—ESTABLISHMENT 76.

Males: Bobbin boy, *huckling machine feeders*, office boy, press feeder and label cutter, tape sewers, thread polishing machine operator, twine knoter.

Females: Ball paperer, bobbin carrier, bobbin cleaners, bobbin setter, bobbin winder, boss doffer, can carrier, *doffers*, drawing frame tenders, end layers, label cutters, *rowing machine tenders*, spinners, spool labelers, spool polisher, tow spreader, tube labeler, twine knotters.

PAPER BOXES—ESTABLISHMENT 77.

Males: *Bundlers*, riveting machine operator.
Females: Box strippers, closers and bundlers, coverer's helper.

POTTERY—ESTABLISHMENTS 78 AND 79.

Males: Dippers' helpers, draw kiln boy, handle makers, *mold runners*, potters' apprentices, wad carrier.
Females: Brusher, glider, *print cutters*, print transferer, stamper.

SILK FINISHING AND DYING—ESTABLISHMENT 80.

Males: Chore boy, office boy.
Females: Muffler folders.

SILK GOODS, BROAD—ESTABLISHMENTS 81 AND 82.

Males: Bobbin boy, bobbin carriers, handers-in and drawers-in, quill boy, sweeper and bobbin cleaner.
Females: Doubler, *handers-in and drawers-in*, redrawers, read stitcher.

SILK GOODS, BROAD AND RIBBON—ESTABLISHMENT 83.

Males: *Bobbin boys*, bordering machine operators' helpers, drying machine operator, drying machine operator's helper, helper in finishing department, office boy, ribbon measurers.
Females: *Edge warpers*, helper in warping room, *quill winders*, redrawer, ribbon cleaner, ribbon folders, ribbon pickers, *ribbon warpers*, *winders*.

SILK GOODS, THROWN—ESTABLISHMENTS 84, 85, AND 86.

Males: *Bobbin boys*, doffers, *reelers*, *skain lacers*, *spinners*.
Females: Doubler, opener's helper, *skain lacers*, *winders*.

SOAP—ESTABLISHMENT 87.

Males: Circular sorter, cutter, *cutters' helpers*, drying frame tender, errand boy, labeler's helper, office boys, *packers*, *packers' helpers*, *pressers*, *pressers' helpers*, press feeder and cleaner, press tender, tray carriers, tray duster.

THREAD, COTTON—ESTABLISHMENT 88.

Males: Bobbin boy, *creelers*, errand boy, fly boys, lap carriers, picker tender, spool stamping machine operator, waste machine operator, yarn bundle makers, yarn bundle strappers, yarn weighers.

Females: *Bobbin cleaners*, *bobbin girls*, bobbin packer, bobbin winders, *box pickers*, can carriers in carding room, card tenders, *darning cotton winder*, doffers, edge turners in box department, end picker, errand girl, *frame cleaners*, number cutter, reeler, speeder tenders, spinners, spool box wrapper, spool girl, spool wrapper, spooler, *sweepers*.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

PENNSYLVANIA.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

ARTIFICIAL FLOWERS—ESTABLISHMENT 89.

Females: Flower makers.

CIGARS—ESTABLISHMENTS 90 AND 91.

Males: Banders.

Females: Banders, *bunch makers, cigar rollers, packers, strippers.*

COAL—ESTABLISHMENTS 92 TO 104, INCLUSIVE.

Males: Car coupler, car runner, door tender, drivers, head men, office boy, oilers, *slate pickers, switchman, weighers.*

CONFECTIONERY—ESTABLISHMENT 105.

Males: *Employees in chocolate room, employee in cocoa room, errand boys, filler, helpers in printing department.*

Females: Box makers, *chocolate dippers, dippers, errand girl, fillers, labeler, pickers, wrappers.*

CORKS—ESTABLISHMENT 106.

Males: Carriers, errand boy, general employees, *punchers, steam box tender, strip facer, wood handlers.*

Females: *Sorters, tapers.*

COTTON AND WOOLEN GOODS—ESTABLISHMENTS 107 AND 108.

Males: *Bobbin boys, chain fasteners, clerk, errand boy, floor boy, handers-in, harness boys, helper in filling department, office boy, sample makers, sweepers, wareroom boy.*

Females: Back tenders on winding machine, *bobbin girls, sample makers, selvage trimmers, sweepers, twister, winder, winder's helper.*

DEPARTMENT STORE—ESTABLISHMENTS 109, 110, AND 111.

Males: Carrier, *cash boys, clerks, delivery boys, errand boys, exchange boy, general helper, helpers in auditing department, helper in button-hole department, inspectors, office boys, sample boys, sign writer, stock boys, wrapper.*

Females: *Cash girls, cashiers, clerks, errand girls, exchange girls, helpers in auditing department, inspectors, milliners' apprentices, office girls, stock girls.*

GLASS BOTTLES, ETC.—ESTABLISHMENT 112.

Males: Carriers-in, *mold shutters.*

GLASS TABLEWARE, ETC.—ESTABLISHMENT 113.

Males: *Carriers-in, carriers-over, knockers-off, mold cleaners, mold holders, mold shutters, packers, pan fillers, polisher, takers-off, tumbler finishers, turners-out, washers-in, water boys.*

Females: Carrier, *cleaners, decorators, dusters, finisher, mold fillers, packers, paperer, shiners and paperers, taker-off, timekeeper's helper, unpacker, washers, wipers.*

HOSIERY—ESTABLISHMENT 114.

Males: Belt tighteners, *oilers, packers, sorters and turners, truck boys, turners.*

Females: *Examiners, general helpers, knitters, knitters' helpers, loopers, office girls, presser-off, printers and boxers, sorters, stamper and boxer, sweeper, loopers, toppers' helpers.*

IRON AND STEEL—ESTABLISHMENTS 115 AND 116.

Males: Bolt nutter, *bolt pointers, die carrier, errand boy, hand-overs, harrow tooth header, laborers, nut tappers, office boy, packer, piler, spare boys, thread cutters.*

Females: *Bolt nutters, counters, piler, table girl, wrappers.*

LACE GOODS, TAPESTRY, ETC.—ESTABLISHMENTS 117, 118, AND 119.

Males: *Bobbin threaders, errand boy, helpers in pattern room, office boy, stock boy.*

Females: *Edger, knotters, lace curtain finishers, spoolers, winder, wrapper.*

LEATHER AND LEATHER GOODS, GLOVES—ESTABLISHMENT 120.

Males: Errand boys, glazers, measurer's helper, *putters-out, skin hangers, stamper-in, glove fastener, stock boys, trimmers, truck boys, weighers' helpers.*

Females: End fasteners.

PICKLES, PRESERVES, ETC.—ESTABLISHMENT 121.

Males: *Corking machine hands, general employee, messenger boy, office boy, packer, printing press feeders, rack makers.*

Females: Bottle passers, *bottlers, can cleaner, catsup filler, general employees, helper at corking table, labelers, labelers and wrappers, spare girls.*

SHIPBUILDING—ESTABLISHMENT 122.

Males: *Fitters' helpers, messenger boys, office boys, rivet heaters, rivet passers.*

MILK GOODS, THROWN—ESTABLISHMENTS 123, 124, AND 125.

Males: Bobbin boys, *general employees, general helper, skein lacer, reelers.*

Females: Doublers, *general employees, skein lacers, matcher, pickers, quiller, reelers, sampler, spinners, twistors, winders.*

MILK GOODS, THROWN AND BROAD—ESTABLISHMENTS 126 AND 127.

Males: Apprentices, bobbin boys, *card cutters, general employees, picker, quiller, twistors, waste sorters, waste sorters and errand boys, winders.*

Females: Doublers, *general helpers, matcher, pickers, quillers, reelers, skein lacers, spinners, throwers, twistors, warpers' helpers, weavers, winders.*

STRUCTURAL IRON—ESTABLISHMENTS 128, 129, AND 130.

Males: Apprentices, assistant bookkeeper, ballers, bar counter, *bell boys, bell scrapers, bolt nutters, buggy runners, chainmakers' helpers, chemists' helpers, clerk, core maker, coupling boys, cover boys, crane boys, greaser, hammer driver, helpers in bolt factory, helpers in laboratory, hoist boy, horse-hookers, inspector, lever boys, machine hands, markers, measurers' helpers, messenger boys, motor runner, office boys, pipe off-layers, paint boy, pipe rollers, putters-up, puncher, recorder, regulator, rivet boys, rivet heaters, rod cutters, screw cutter, scavenger boys, sheet counters, shipping clerks, stamper, stencilers, store boy, tapers, tapers' helpers, ticket boy, tube cutters, water boys, weighers.*

Females: Stenographer.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

PENNSYLVANIA—Concluded.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

WOOLEN AND WORSTED GOODS—ESTABLISHMENT 131.	WOOLEN AND WORSTED YARNS—ESTABLISHMENTS 132 AND 133.
Males: Band boys, bobbin boys, carders, <i>creelers</i>, errand boy, <i>handlers-in</i>, office boys, oilers, packer, <i>piecers</i>, roller cutter, roving carriers, sweepers, tape boy, waste sorters. Females: Bobbin girls, <i>doffers</i>, finishing machine tender, general helper, <i>piecer</i>, rail setters, speeder tender, <i>spoolers</i>, sweepers, twisters, <i>winders</i>.	Males: Band boys, <i>bobbin boys</i>, carders, <i>doffers</i>, oilers, press boy, tape boy, truck boys. Females: Bobbin girls, <i>doffers</i>, examiner, reelers, roving carrier, roving frame tenders, <i>spinners</i>, <i>spoolers</i>, <i>sweepers</i>, <i>twisters</i>.
MARYLAND.	
CIGARS AND CIGARETTES—ESTABLISHMENT 134. Males: Bunch maker. Females: Banding machine operators, <i>bunch makers</i>, cigarette machine operators, cigarette makers, <i>cigar rollers</i>, <i>hand strippers</i>, machine strippers, stamp pasters, <i>wrappers</i>.	GLASS BOTTLES—ESTABLISHMENTS 140 AND 141. Males: Bottle washer, <i>carriers-in</i>, firer, <i>grinders</i>, knockers-off, <i>mold shutters</i>, <i>snappers-up</i>, spare boys, stopper filer, stopper tiers. Females: Cork fitters.
CLOTHING FURNISHINGS—ESTABLISHMENTS 135 AND 136. Males: Cutters, cutter and errand boy, stamper, stock boy. Females: Batting tackers, pad examiner, <i>pad makers</i>, <i>pad pinners</i>, <i>pad trimmers</i>, sewing machine operator.	MEN'S CLOTHING AND FURNISHINGS—ESTABLISHMENT 142. Males: Crea: ers, cutter, damping machine helpers, <i>errand boys</i>, examiner, press boy in printing department, <i>sewing machine operators</i>, spreaders' helpers, tape cutter, ticket stampers, trimmer, truck boy. Females: Bobbin winders, box taper, box tier, box wrapper, bundlern, carl maker, <i>creasers</i>, damping machine feeders, damping machine helpers, errand girls, <i>examiners</i>, ironing machine helpers, paper box maker, record keepers, <i>sewing machine operators</i>, starching machine feeders, starching machine helpers, <i>trimmers</i>.
COTTON DUCK, TWINE, AND ROPE—ESTABLISHMENTS 137 AND 138. Males: Band boy, bobbin boy, bobbin boy and sweeper, boss <i>doffers</i>, <i>doffers</i>, doublers in rope room, drawing frame tenders, filling winders, former in rope room, oilers, reeler, roving boy, <i>singlers in rope room</i>, <i>sweepers</i>, truck boys. Females: <i>Doffers</i>, <i>filling winders</i>, <i>spinners</i>, <i>spoolers</i>, sweepers, <i>therr-in</i>.	TOBACCO—ESTABLISHMENTS 143 AND 144. Males: Carrier, errand boy, flake catcher, packer, <i>press boys in tin department</i>, <i>press boys' helpers in tin department</i>. Females: <i>Box wipers in tin department</i>, labelers, stamp pasters.
DEPARTMENT STORE—ESTABLISHMENT 139. Males: Bundle and errand boy, cash boys. Females: <i>Cash girls</i>, <i>examiners</i> and <i>wrappers</i>.	

NORTH CAROLINA.

CORDAGE, YARN, ETC.—ESTABLISHMENT 145.	FURNITURE—ESTABLISHMENTS 154, 155, AND 156.
Males: <i>Doffers</i>, inspectors, yarn carriers. Females: <i>Spinners</i>.	Males: Cutting machine feeder, fillerspreader, <i>gluers</i>, <i>off-bearers</i>, sand paperers, upholsterers, varnishers.
COTTON GOODS—ESTABLISHMENTS 146 TO 150, INCLUSIVE. Males: Band boys, band makers, bobbin carriers, <i>doffers</i>, doffer and spinner, drawing frame tenders, loom cleaners, machine stitcher, oiler, quiller, <i>spinners</i>, stitcher in cloth room, <i>sweepers</i>, sweeper and water carrier, twisters, water boy, weavers. Females: Bobbin untangler, cloth tackers, <i>doffers</i>, drawers-in, inspectors, <i>spinners</i>, <i>spoolers</i>, twister, weavers.	MEN'S CLOTHING—ESTABLISHMENT 157. Males: Trimmers. Females: Cleaner, trimmers and button sewers.
COTTON YARNS—ESTABLISHMENTS 151, 152, AND 153. Males: Band makers, <i>doffers</i>, oiler and band boy, spinner, sweepers, twisters. Females: Cone winder, reeler, <i>spinners</i>, <i>spoolers</i>.	TOBACCO—ESTABLISHMENT 158. Males: Liners in box department, lining cutters in box department, lump pickers, office boy, packers, <i>plug pickers</i>, <i>stemmers</i>, <i>tappers</i>, <i>weighers</i>. Females: <i>Bundle openers</i>, filler pickers, <i>stemmers</i>.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

SOUTH CAROLINA.

[The occupations in each industry at which a comparatively large number of children were employed are printed in italics; those at which only one child was employed are shown in the singular number.]

COTTON GOODS—ESTABLISHMENTS 159 TO 166, INCLUSIVE.	COTTON GOODS—ESTABLISHMENTS 159 TO 166, INCLUSIVE—concluded.
Males: Band boys, band makers, bobbin boys, breaker tender, card tender, cloth room helpers, <i>doffers</i> , <i>drawing frame tenders</i> , end piecers, loom cleaner, oiler, quill boys, roving boy, slubbing frame tender, speeder tenders, <i>spinners</i> , stitchers in cloth room, <i>sweepers</i> , tacker, truck boy, twisters, waste picker, weavers.	Females: Band girl, creeler, <i>doffers</i> , drawers-in, speeder tender, <i>spinners</i> , <i>spoolers</i> , weavers.
	COTTON YARNS—ESTABLISHMENT 167.
	Males: Band maker, bobbin boy, cone winders, <i>doffers</i> , drawing frame tender, <i>sweeper</i> , <i>twisters</i> . Females: Cone winder, reeler, <i>spinners</i> .

GEORGIA.

COTTON AND WOOLEN GOODS—ESTABLISHMENT 168.	COTTON GOODS, BAGS, AND BLEACHING—ESTABLISHMENT 178—concluded.
Males: <i>Back tenders on mules</i> , band boy, bobbin boys, <i>doffers</i> , <i>spinners</i> . Females: Back tender speeders, <i>spinners</i> , weaver.	Females: Bag straighteners in printing department, bag turners, <i>doffers</i> , drawers-in, drawing frame tender, printing press feeders, <i>sewing machine operators</i> , speeder tenders, <i>spinners</i> , <i>spoolers</i> , twister, weavers.
COTTON GOODS—ESTABLISHMENTS 169 TO 177, INCLUSIVE.	COTTON YARNS—ESTABLISHMENT 179.
Males: Band makers, cloth brusher, cloth room boys, creelers, <i>doffers</i> , drawers-in, <i>drawing frame tenders</i> , harness cleaner, oilers, quill boys, quiller, rope spinners, rope twisters, roving fixers, skein linker, <i>spinners</i> , stitchers, <i>sweepers</i> , tackers, truck boys, twisters, waste picker, <i>weavers</i> , winder.	Males: Back tenders on mules, <i>doffers</i> . Females: Spinner.
Females: Cloth inspectors, creelers, <i>doffers</i> , drawers-in, drawing frame tenders, end piecers, harness cleaners, rack hand, speeder tender, <i>spinners</i> , <i>spoolers</i> , stenciler, tackers, twisters, <i>weavers</i> .	FURNITURE—ESTABLISHMENT 180.
COTTON GOODS, BAGS, AND BLEACHING—ESTABLISHMENT 178.	Males: Carriers, <i>off-bearers</i> .
Males: <i>Bag turners</i> , band boy, bleaching machine tender, chalker, cloth packers in bleachery, <i>doffers</i> , drawing frame tender, errand boys, oiler, quill boys, quillers, reeler, <i>spinners</i> , <i>sweeper</i> , washing machine tender, weavers.	MEN'S CLOTHING—ESTABLISHMENT 181.
	Males: Bobbin winder, button machine operators, carrier, folders, <i>markers</i> . Females: Bobbin winder, <i>buttonhole machine operators</i> , trimmers.
	PAPER BAGS, WRAPPING PAPER, ETC.—ESTABLISHMENT 182.
	Females: Bag machine operators, <i>bag straighteners in printing room</i> , carrier, helpers at bag machine, helper at box press, helper at gluing machine, <i>tray makers</i> .

ALABAMA

COTTON GOODS—ESTABLISHMENT 183.	KNIT GOODS—ESTABLISHMENT 186.
Males: Band boy, <i>doffers</i> , drawing frame tenders, oilers and cleaners, <i>spinners</i> , <i>sweepers</i> . Females: Oiler and cleaner, <i>spinners</i> .	Males: <i>Doffers</i> , helper in knitting room, oiler, spinner, <i>sweepers</i> . Females: Buttoners, cutter, cycle machine operator, sewers, <i>spinners</i> , stamper, trimmers, winders.
COTTON YARNS—ESTABLISHMENTS 184 AND 185.	
Males: Band makers, bobbin boy, <i>doffers</i> , spinners, truck boys, <i>twisters</i> . Females: Spinners.	

WISCONSIN

BREWING—BOTTLING DEPARTMENT—ESTABLISHMENTS 187 AND 188.	DEPARTMENT STORE—ESTABLISHMENT 190.
Males: <i>Bottle inspectors</i> , <i>bottle passers</i> , cappers, <i>corking machine operators</i> , fillers, filling room hands, labeler, <i>labeling machine operators</i> , washhouse hands, <i>washing machine operators</i> , witer. Females: Cleaners, <i>labelers</i> , <i>labelers</i> and cleaners, ribboners, tinfoilers.	Males: Errand boys. Females: <i>Cash girls</i> , telephone operator.
CONFECTIONERY—ESTABLISHMENT 189.	PAPER BOXES—ESTABLISHMENT 191.
Females: Candy molders, <i>caramel wrappers</i> , <i>sachet dippers</i> , <i>date fillers</i> , nut placers, <i>tray carriers</i> .	Males: General helpers. Females: <i>Edge turners</i> , <i>general helpers</i> , <i>pasters</i> .
	TOBACCO—ESTABLISHMENT 192.
	Males: Carrier, <i>packers</i> , piler, piler and carrier, <i>sorters</i> , <i>strippers</i> . Females: Coupon placers, stamp <i>pasters</i> , <i>strippers</i> .

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Continued.

ILLINOIS.

[The occupations in each industry at which a comparatively large number of children were employed are printed in *italics*; those at which only one child was employed are shown in the singular number.]

AGRICULTURAL IMPLEMENTS, HARVESTING MACHINERY—ESTABLISHMENT 193.

Males: *Bench hands*, bolt miller, bolt nutters, borers, canvas clippers, canvas finishers, canvas tacking machine hands, case hardener's helper, *chain makers*, chamferers' helpers, core blackeners, core black maker, core makers, design transferer, *drillers' helpers*, errand boy, fitters, grinders, heater, laborer, lathe hands, *office boys*, planer's helper, pointer's helper, punchers' helpers, rivet placers, sawyer's helper, section packers, *section sorters*, tacker, temperer's helper, threaders' helpers, truck boy, wire boys.

BAKERY—ESTABLISHMENT 194.

Males: Bakers' helpers, box boys, cake cutters, dough dusters, *fruit cleaners*, icers, labeler, *pan boys*, scrap boys, slide tenders, truck boy.

Females: *Bundlers*, can cleaner, carton closers, carton creasers, *carton folders*, *carton formers*, carton sealers, cracker sorters, glass wiper, *icers*, *labelers*, packers, pasters, *przel twistlers*.

CONFECTIONERY—ESTABLISHMENT 195.

Males: Cracker jack filler, *packers*.

Females: Nut placer, *packers*, *wrappers*.

DEPARTMENT STORE—ESTABLISHMENTS 196, 197, AND 198.

Males: *Bundle boys*, cash boys, cashiers, delivery boys, *helpers in auditing bureau*, helpers in carpet department, *helpers in countingroom*, helpers in mail-order department, *helpers in shipping room*, helpers in upholstery department, *inspectors*, office boys, *stock boys*, wagon boys.

Females: *Bundle girls*, cash girls, cashiers, clerk, helpers in auditing bureau, helper in counting room, *helpers in mail-order department*, helper in upholstery department, *inspectors*, office girls, stock girls, time girl.

DEPARTMENT STORE, MANUFACTURING DEPARTMENT—ESTABLISHMENT 199.

Males: Apprentices, *errand boys*, silverware cleaner, stock boy, timekeeper.

Females: Apprentices, boxer, comfort tufters, cuff machine operator, cushion stuffers, cutter, *errand girls*, finishers, general helpers, *makers of fancy goods and novelties*, office girls, packer, *paper workers*, rippers, *sewers*, sewing machine operators, stock girls, thread cabinet girls.

DRESS AND CLOAK TRIMMINGS—ESTABLISHMENT 200.

Males: Errand boy, *spool boys*.

Females: Belt makers, braid maker, button spinner, chore girl, *naul-head stuffers*, ornament maker, packer, spool filler, time girl.

MEAT PACKING—ESTABLISHMENTS 201 AND 202.

Males: Boilers, bone sorter, box opener, box piler, can coverer, can fillers, casing turners, door boys, *employees in tin can department*, gate tender, helpers in cutting department, helpers in killing department, helpers in trimmings department, labelers, liners, machine tenders, marker, *messenger boys*, office boys, pillow filler, sausage brander, sausage hangers, sausage tiers, *sausage twistlers*, shop boys, soap feeders, soap wrapper, sprinkler, stencilers, stripper, tank watcher, truck boys.

Females: Bristle tier, butterine wrapper, can wipers, casing turner, chipped beef packer, labeler, plate scraper, *sausage packers*, soap wrappers, toppers, wrappers.

MEAT PACKING, CLERICAL FORCE—ESTABLISHMENT 203.

Males: Office boys.

RUBBER GOODS—ESTABLISHMENT 204.

Females: Arm-band makers, boxer, button stringer, finisher, *Lindsay hands*, pressers.

TIN CANS—ESTABLISHMENT 205.

Males: *Enders*, handy boys, packers, plier.

Females: *Enders*, packers.

TWINE—ESTABLISHMENT 206.

Males: Band cutter, cleaner, elevator boy, general helper, office boy, roving boys, *succpers*, testers, weighers, winder.

Females: Baller, cleaners, knot tiers, *sample makers*, *spinners*, weigher.

MISSOURI.

BOOTS AND SHOES—ESTABLISHMENTS 207 AND 208.

Males: *Blackeners*, bottom brushers, bottom filers, bottom levelers' helpers, canvas cutter, cementers, channel cementers, channel cutter, channel turners, cleaners, counter breakers, edge blackener, edge brushers, edge plinker, edge puncher, end scraper, entry clerk, general helper, heel burnisher, *heelers' helpers*, heel makers, heel pasters, heel-stock cutters, last sorters, lining bunchers, number examiners, office boy, polishers, rackers, relasters, sand paperer, scrap sorters, shank blackeners, shank markers, sole carriers, sole cementers, sole pasters, sole stamper, sole stripers, sole tacking machine operators, sole wetters, stampers, stock cutters, *tackers' helpers*, tack pullers, top-piece sander,

BOOTS AND SHOES—ESTABLISHMENTS 207 AND 208—concluded.

toucher-up, *trimming cutters*, upper trimmer, vamp turner, welt puller.

Females: Back stayers, blackeners, buttonhole maker, cementers, *channel cementers*, edge nickers, folders, folding machine operator, *lacers*, liner, lining maker, lining pasters, lining trimmer, marker, menders, office girl, pasters' helpers, piece taggers, polishers, punching machine operators, side closer, side liner, side stayers, *sorters*, stamper, stamping machine operator, strap banders, thread cutters, tip beveler, tip blackener, tip markers, tip singer, toe pieces, top stitchers, top turners, trimmer, *trimming cutters*, vamp folders.

TABLE II.—OCCUPATIONS OF CHILDREN UNDER 16 YEARS OF AGE, BY SEX AND INDUSTRY—Concluded.

MISSOURI—Concluded.

[The occupations in each industry at which a comparatively large number of children were employed are printed in *italics*; those at which only one child was employed are shown in the singular number.]

BREWING—ESTABLISHMENT 209.	TOBACCO—ESTABLISHMENT 213.
Males: <i>Labelers, tin foilers, wrapper cutters, wrappers.</i> Females: <i>Labelers, tin foilers, wrappers.</i>	Males: <i>Box handlers, box liners, box nailers, office boys, rackers, sweepers, taggers, wrapper stemmers.</i> Females: <i>Packers, tagger, wrapper stemmers.</i>
DEPARTMENT STORE—ESTABLISHMENTS 210, 211, AND 212.	WOODEN BOXES—ESTABLISHMENTS 214 AND 215.
Males: <i>Bundle boys, cash boys, door boys, office boy, wagon boys.</i> Females: <i>Bundle girls, cash girls.</i>	Males: <i>Dray drivers, end pilers, glue dippers, glue machine operators' helpers, liners-out, lumber carrier, nailers' helpers, off-bearers, side carriers, side gluer, taker-off, trimmer's helper, truck boy.</i>

TABLE III.—HOURS OF LABOR, BY ESTABLISHMENTS.

State and industry.	Establishment number.	Actual hours of working time.			Intermission at noon (minutes).	Are children required to work over-time?
		Monday to Friday (per day).	Saturday.	Per week.		
MASSACHUSETTS.						
Boots and shoes.....	1	10	5	55	60	No.
.....	2	10	5	55	60	No.
Brushes.....	3	10	7½	57½	60	No.
Carpets.....	4	10½	6½	58	60	No.
Confectionery.....	5	9½	8½	56	60	No.
Cotton and worsted goods.....	6	10½	5½	58	60	No.
Cotton goods.....	7	10½	5½	58	60	No.
.....	8	10½	5½	58	60	No.
.....	9	10½	5½	58	60	No.
.....	10	10½	5½	58	60	No.
.....	11	10½	5½	58	60	No.
.....	12	10½	5½	58	60	No.
.....	13	10½	5½	58	60	No.
Department store.....	14	8	8	48	60	Yes.
Rubber goods, boots.....	15	9½	8½	56	60	No.
Woolen goods.....	16	10½	5½	58	60	No.
.....	17	10½	5½	58	60	No.
Worsted goods.....	18	10½	5½	58	60	No.
RHODE ISLAND.						
Bleaching cotton goods.....	19	10½	6½	60	45	Yes.
Clothing, hats, and shoes, retail.....	20	9½	13½	58½	60	Yes.
Cotton goods.....	21	10½	6½	60	45	No.
.....	22	10½	6½	60	45	No.
Cotton goods, narrow fabrics.....	23	10½	6½	60	60	Yes.
Dyeing cotton and woolen goods.....	24	10½	6½	60	45	Yes.
Hosiery and knit goods.....	25	10½	9½	60	50	No.
Jewelry.....	26	10	9	59	60	No.
Soap and washing powder.....	27	10	5	55	30	No.
Worsted yarns.....	28	10½	6½	60	45	No.
NEW YORK.						
Artificial flowers and feathers.....	29	9	8	53	60	Yes.
.....	30	9	9	54	60	Yes.
.....	31	8½	7½	50	45	No.
Artificial flowers, materials for.....	32	10	9	59	30	No.
Blank books.....	33	10½	7½	59	45	Yes.
Carpets.....	34	10½	7½	60	30	Yes.
Coffee cleaning.....	35	9½	5½	52	30	No.
Confectionery.....	36	10	9	59	30	No.
.....	37	9½	8½	56	60	Yes.
Cooperage.....	38	10	9	59	30	Yes.
Cordage, twine, etc.....	39	10½	5½	59	45	No.

TABLE III.—HOURS OF LABOR, BY ESTABLISHMENTS—Continued.

State and industry.	Establishment number.	Actual hours of working time.			Intermission at noon (minutes).	Are children required to work overtime?
		Monday to Friday (per day).	Saturday.	Per week.		
NEW YORK—concluded.						
Cotton goods.....	40	a 10 ^h	b 5 ^h	c 60	60	No.
	41	a 11 ^h	5	c 60	60	No.
Department store.....	42	9	9	d 54	60	No.
	43	10	11 ^h	d 61 ^h	60	Yes.
	44	e 9 ^h	12 ^h	60	60	Yes.
	45	8 ^h	8 ^h	52 ^h	45	Yes.
Dress trimmings, embroidery, etc.....	46	9 ^h	8 ^h	55	30	No.
Drugs, wholesale.....	47	8 ^h	7	49 ^h	45	No.
Dry goods.....	48	8 ^h	8 ^h	51	60	No.
Handkerchiefs.....	49	9 ^h	8 ^h	54 ^h	45	No.
Knit goods.....	50	11	5	60	60	No.
	51	a 10 ^h	7 ^h	f 60	60	No.
Laundry.....	52	9 ^h	9 ^h	57	60	No.
Men's furnishings.....	53	9 ^h	8 ^h	56	60	No.
Men's furnishings and laundry.....	54	a 10	A 9	f 59	60	No.
	55	a 10	6	f 56	60	No.
Paper boxes.....	56	8 ^h	8 ^h	51	60	Yes.
Paper boxes, bags, envelopes, etc.....	57	10	4 ^h	54 ^h	30	No.
Pearl buttons.....	58	9 ^h	k 8 ^h	l 56	30	No.
Pianoforte actions.....	59	10	9	59	30	No.
Tailoring.....	60	9 ^h	8 ^h	56	60	Yes.
Underwear and bedding.....	61	9 ^h	7 ^h	54	40	No.
Wall paper.....	62	10 ^h	9 ^h	60	50	No.
Women's belts and skirt bindings.....	63	9	8 ^h	53 ^h	45	No.
Women's neckwear, laces, etc.....	64	8 ^h	5	47 ^h	60	No.
NEW JERSEY.						
Bakery, cracker.....	65	10	8	58	60	Yes.
Cigars.....	66	10 ^h	7 ^h	60	30	No.
Electric wire and cable.....	67	10	10	60	60	Yes.
Electric wire and cable, clerical force.....	68	10	10	60	60	No.
Electrical supplies.....	69	10	9 ^h	59 ^h	30	Yes.
Glass bottles.....	70	m 8 ^h	n 8	o 52	p 60	Yes.
	71	q 8 ^h	n 8 ^h	r 52 ^h	60	No.
	72	8 ^h	n 8 ^h	s 51	60	No.
Glass bottles and druggists' specialties.....	73	8 ^h	n 8 ^h	s 51	60	No.
Glass bottles and window glass.....	74	8 ^h	n 8 ^h	s 51	60	No.
Hat bands.....	75	10	5	55	60	Yes.
Linen thread, twine, and yarns.....	76	10	5	56	60	No.
Paper boxes.....	77	10	9	59	60	No.
Pottery.....	78	9 ^h	8	55 ^h	60	No.
	79	10	8	58	60	Yes.
Silk finishing and dyeing.....	80	10	5	55	60	Yes.
Silk goods, broad.....	81	10	5	55	60	No.
	82	10	5	56	60	No.
Silk goods, broad and ribbon.....	83	10	5	56	60	No.
Silk goods, thrown.....	84	10	5	56	60	No.
	85	10	5	56	60	No.
	86	10	5	56	60	No.
Soap.....	87	10	6	56	30	Yes.
Thread, cotton.....	88	10	5	55	60	Yes.

a Persons over 16; children under 16, 9 hours.

b Persons over 16; children under 16, 5 hours.

c Persons over 16; children under 16, 50 hours.

d Not including two hours on Sunday for employees over 16; children under 16 allowed to remain away sufficient time each week to reduce their total hours to 60.

e Except Monday, 10^h hours.f Persons over 16; children under 16, 52^h hours.

g In winter; 11 hours in summer.

h In winter; 5 hours in summer.

i In winter; 60 hours in summer.

j Persons over 16; children under 16, 51 hours.

k Except June, July, and August, 5 hours.

l Except June, July, and August, 52^h hours.m Day force, except that 9 hours are worked on Friday; night force, 9^h hours.

n Day force only.

o Day force; night force, 46^h hours.

p Except Friday, 45 minutes.

q Day force; night force, 9^h hours.r Day force; night force, 46^h hours.s Day force; night force, 42^h hours.

TABLE III.—HOURS OF LABOR, BY ESTABLISHMENTS—Continued.

State and industry.	Estab- lishment number.	Actual hours of working time.			Inter- mission at noon (min- utes).	Are chil- dren required to work over- time?
		Monday to Friday (perday).	Satur- day.	Per week.		
PENNSYLVANIA.						
Artificial flowers.....	89	9	8½	53½	30	No.
Cigars.....	90	10½	6½	60	30	No.
	91	9	7½	52½	60	No.
Coal breakers.....	92	9	9	54	30	Yes.
	93	9	9	54	30	Yes.
	94	6	6	36	90	No.
	95	9	9	54	30	No.
	96	8	8	48	30	Yes.
	97	9	9	54	30	No.
	98	9	9	54	30	Yes.
	99	7	7	42	60	No.
	100	9	9	54	45	Yes.
	101	9	9	54	30	No.
	102	8	8	48	30	No.
	103	9	9	54	30	No.
	104	4	4	24	(a)	No.
Confectionery.....	105	9½	9	57½	30	Yes.
Corks.....	106	10	5	55	30	Yes.
Cotton and woolen goods.....	107	10½	6½	60	45	No.
	108	10½	6½	60	40	No.
Department store.....	109	9	9	54	45	Yes.
	110	b 9½	c 10½	d 59	45	No.
	111	8½	8½	52½	45	No.
Glass bottles, etc.....	112	e 8½	f 8½	g 50	60	No.
Glass tableware, etc.....	113	h 9½	i 4½	k 52½	60	No.
Hosiery.....	114	10½	6½	60	45	No.
Iron and steel.....	115	10½	8½	60	45	Yes.
	116	10½	8½	60	45	Yes.
Lace goods, tapestry, etc.....	117	10½	6½	60	45	No.
	118	10½	6½	60	45	No.
	119	10½	5½	59½	45	No.
Leather and leather goods, gloves.....	120	10	9	59	30	Yes.
Pickles, preserves, etc.....	121	10½	9½	60	30	No.
Shipbuilding.....	122	10½	8½	60	45	Yes.
Silk goods, thrown.....	123	10½	6	58½	30	Yes.
	124	10½	6	58½	30	No.
	125	j 10½	f 6	k 58½	l 30	No.
Silk goods, thrown and broad.....	126	10½	6	58½	30	Yes.
	127	10½	6	58½	30	No.
Structural iron.....	128	m 9½	n 8½	o 56	30	No.
	129	p 9½	q 7½	r 54	s 45	No.
	130	j 10½	t 9½	u 59½	25	Yes.
Woolen and worsted goods.....	131	10½	6½	60	45	No.
Woolen and worsted yarns.....	132	10½	6½	60	30	No.
	133	10½	6½	60	45	No.
MARYLAND.						
Cigars and cigarettes.....	134	9½	9½	58	30	Yes.
Clothing furnishings.....	135	9½	9	56½	30	Yes.
	136	10	9½	59½	30	Yes.
Cotton duck, twine, and rope.....	137	10	10	60	45	No.
	138	10	10	60	45	No.

a Do not work in the afternoon.

b For males; females, 9½ hours.

c For males; females, 9½ hours.

d For males; females, 56 hours.

e Day force; night force, 7½ hours.

f Day force only.

g Day force; night force, 38½ hours.

h Night force, the same.

i Day force; night force, 4½ hours Monday from 12.15 a. m. to 5 a. m.

j Day force; night force, 11½ hours.

k Day force; night force, 57½ hours.

l Also at midnight for night force.

m Plate department; rolling mill, 11½ hours.

n Plate department; rolling mill, day force, 10½ hours; night force, Sunday night, 11½ hours.

o Plate department; rolling mill, day force, 68 hours; night force, 69 hours.

p Polishing mill; bolt, chain, and laboratory departments, 10½ hours; steel and rolling mill, day and

night forces, 11½ hours.

q Polishing mill; bolt, chain, and laboratory departments, 8½ hours; steel and rolling mill, day force,

and night force Sunday night, 11½ hours.

r Polishing mill; bolt, chain, and laboratory departments, 60 hours; steel and rolling mill, day and

night forces, 69 hours.

s Except steel and rolling mill, 30 minutes.

t Day force; night force, 69 hours.

TABLE III.—HOURS OF LABOR, BY ESTABLISHMENTS—Continued.

State and industry,	Estab- lishment number.	Actual hours of working time.			Inter- mission at noon (min- utes.)	Are chil- dren required to work over- time?
		Monday to Friday (perday).	Satur- day.	Per week.		
MARYLAND—concluded.						
Department store.....	139	a 8½	b 12	e 55½	d 45	Yes.
Glass bottles.....	140	8½	7½	50½	60	Yes.
	141	8½	7½	51	60	Yes.
Men's clothing and furnishings.....	142	10	10	60	30	Yes.
Tobacco.....	143	8	5	45	30	Yes.
	144	10	5	55	30	Yes.
NORTH CAROLINA.						
Cordage, yarns, etc.....	145	e 11½	f 9½	66	40	No.
Cotton goods.....	146	11½	8½	66	g 39	No.
	147	11½	8½	66	40	No.
	148	e 11½	h 8½	66	38	No.
	149	11½	8½	66	j 45	Yes.
Cotton yarns.....	150	11½	8½	66	47½	No.
	151	11½	8	65½	45	No.
	152	e 11½	h 8½	66	30	No.
	153	e 11½	h 8½	66	35	No.
Furniture.....	154	10½	8½	60	45	No.
	155	10½	8½	60	30	No.
Men's clothing.....	156	10½	9½	62	45	No.
Tobacco.....	157	10½	8½	59½	45	No.
	158	11	9½	64½	60	Yes.
SOUTH CAROLINA.						
Cotton goods.....	159	12	6	66	60	Yes.
	160	11½	9½	66	40	Yes.
	161	11½	6½	66	40	No.
	162	12	6	66	45	No.
	163	k 12	k 6	66	l 45	Yes.
	164	11½	8½	66	60	No.
	165	12	6	66	45	No.
	166	12	6	66	40	Yes.
Cotton yarns.....	167	12	6	66	45	Yes.
GEORGIA.						
Cotton and woolen goods.....	168	11½	9½	65½	45	No.
Cotton goods.....	169	11½	8½	65½	30	Yes.
	170	11½	9½	66	40	No.
	171	e 11½	h 9½	66	40	No.
	172	11½	9½	66	40	No.
	173	11½	9½	66	40	No.
	174	11½	6½	65½	45	No.
	175	11½	8	65½	30	Yes.
	176	11½	8½	65	m 45	No.
	177	11½	7½	65½	60	No.
Cotton goods, bags, and bleaching.....	178	n 12	o 6	p 66	q 45	Yes.
Cotton yarns.....	179	11½	9½	65½	40	No.
Furniture.....	180	10½	8½	60	30	No.
Men's clothing.....	181	9½	5	53½	30	No.
Paper bags, wrapping paper, etc.....	182	10	8	58	30	Yes.
ALABAMA.						
Cotton goods.....	183	r 11½	8½	s 67½	45	No.
Cotton yarns.....	184	11½	8½	66	30	No.
	185	12½	6	66½	30	No.
Knit goods.....	186	11½	8	65½	30	No.

a Except cash girls, 9 hours.

b Except cash girls, 12½ hours.

c Except cash girls, 57½ hours.

d Except cash girls, 30 minutes.

e Day force; night force, 12 hours.

f Day force; night force, 6 hours.

g Except Saturday, 35 minutes.

h Day force only.

i Day force; night force, 60 hours.

j Except Saturday, 60 minutes.

k Day force; night force, 11 hours.

l Fifteen minutes at midnight for night force.

m Except Saturday, 60 minutes.

n Except in bag and bleaching departments, 10 hours.

o Except in bag and bleaching departments, 5 hours.

p Except in bag and bleaching departments, 55 hours.

q Except in bag and bleaching departments, 60 minutes.

r Except in carding, drawing, and picker rooms, 8½ hours on Monday.

s Except in carding, drawing, and picker rooms, 64½ hours.

HOURS OF LABOR, BY ESTABLISHMENTS—Concluded.

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and industry.	Estab- lishment number.	Actual hours of working time.			Inter- mission at noon (min- utes).	Are chil- dren required to work over- time?
		Monday to Friday (perday).	Satur- day.	Per week.		
WISCONSIN.						
Brewing, bottling department.....	187	8	8	48	60	No.
Confectionery.....	188	8	8	48	60	Yes.
Department store.....	189	10	9	59	60	No.
Paper boxes.....	190	9	11½	56½	60	Yes.
Tobacco.....	191	10	9½	59½	30	No.
	192	8	8	48	60	No.
ILLINOIS.						
Agricultural implements, harvesting machinery.....	193	10	9½	59½	30	Yes.
Bakery.....	194	10	10	60	60	Yes.
Confectionery.....	195	10	9½	59½	30	No.
Department store.....	196	9½	9½	58½	30	Yes.
	197	8½	8½	53	40	No.
	198	9	9	54	45	Yes.
Department store, manufacturing de- partment.....	199	9	7	52	30	No.
Dress and cloak trimmings.....	200	9½	8	56½	30	No.
Meat packing.....	201	10	10	60	30	No.
	202	10	10	60	30	No.
Meat packing, clerical force.....	203	8½	5	47½	30	No.
Rubber goods.....	204	9	8	53	30	Yes.
Tin cans.....	205	10½	6½	57½	45	Yes.
Twine.....	206	10	9½	59½	30	Yes.
MISSOURI.						
Boots and shoes.....	207	10	9	59	40	Yes.
	208	10	9	59	60	No.
Brewing.....	209	8	8	48	60	No.
Department store.....	210	9½	9½	55½	45	No.
	211	9½	12½	59½	30	Yes.
	212	9½	9½	57	30	No.
Tobacco.....	213	10	10	60	30	Yes.
Wooden boxes.....	214	10½	9½	60	50	Yes.
	215	10	10	60	30	Yes.

a Except Tuesday and Thursday, 9½ hours.

b Except Tuesday and Thursday, 45 minutes.

LEGISLATION RELATING TO CHILD LABOR.

Legislation relating to child labor is so varied in character in the different States and Territories that it is difficult to classify it satisfactorily. For the purposes of the present summary it has been most convenient to consider child-labor legislation under the following groups: (1) Statutes fixing an absolute age limit for the employment of children in all gainful occupations or in one or more of the principal groups of industries; (2) statutes prohibiting the employment of children of school age, or of illiterate children during school time, or unless they have complied with certain educational requirements; (3) statutes prohibiting the employment of children in certain dangerous, injurious, or immoral occupations, such as selling or handling intoxicating liquors, or as rope or wire walkers, gymnasts, contortionists, street singers or musicians, mendicants, itinerant peddlers, etc.; (4) statutes prohibiting certain dangerous operations, such as *running elevators*, *cleaning machinery in motion*, or *operating danger-*

ous machinery, etc.; (5) statutes restricting the hours of labor or prohibiting night work on the part of children; (6) legislation not included in the above groups.

AGE LIMIT FOR EMPLOYMENT.

The age limit prescribed by law in the different States under which employment is absolutely prohibited is either 10, 12, 13, 14, or 16 years. As above stated, the law applies in some States to only one industry; in others, to several groups of industries. In some cases an age limit is prescribed under which children can not be employed except during school vacation, and in some an age limit is fixed under which persons can not be employed in certain occupations or during certain hours. The two last-mentioned classes of laws are separately treated.

The age limit prescribed by statute under which children are not permitted to be employed is as follows:

Sixteen years, for underground work in mines, in Pennsylvania and Texas.

Fourteen years, for work in factories, mechanical and mercantile establishments, and mines, in Illinois, Ohio, Oregon, and Washington;^(a) for work in factories and mechanical and mercantile establishments, in Connecticut, Massachusetts, and Michigan; for work in factories or mechanical establishments and in mines and smelting works, in Colorado, Indiana, Kentucky, Minnesota, New Jersey, Tennessee, and Wisconsin; in factories and mechanical establishments, in Louisiana (girls), Missouri, and New York; in mines and smelting works, in Arkansas, Idaho, Montana, South Dakota, Utah, and Wyoming; for surface work at mines, in Pennsylvania.

Thirteen years, for work in "any factory, manufacturing or mercantile industry, laundry, workshop, renovating works, or printing office," in Pennsylvania.

Twelve years, in factories and mechanical and mercantile establishments, in California and Rhode Island; in factories and mechanical establishments and in mines and smelting works, in North Carolina, North Dakota, South Carolina,^(b) Virginia, and West Virginia; in factories and mechanical establishments, in Louisiana (boys), Maine, New

^a In Washington permission may be given by a superior court judge for the employment of a child between 12 and 14 years of age at an occupation which in his judgment is not dangerous or injurious to the health or morals of such child, when the child's labor is necessary for its support or for the assistance of an invalid parent.

^b In South Carolina a child under 12 years of age may be permitted by a magistrate or clerk of court to work in a textile establishment if the child's labor is necessary for its support or for the support of a widowed mother or disabled father. Children under 12 years may be employed in textile establishments during June, July, and August if they have attended school at least four months during the current school year and can read and write.

Hampshire, and Texas; in mercantile establishments, in New York; in mines and smelting works, in Alabama, Iowa, Kansas, Maryland, Missouri, and the organized and unorganized Territories of the United States where coal mining operations are carried on.

Ten years, in factories and mechanical and mercantile establishments, in Nebraska; in factories and mechanical establishments, in Alabama, Arkansas, and Vermont.

In New York no boy under 10 years and no girl under 16 years of age is permitted to sell or expose for sale newspapers in any public place in cities of the first class. All boys actually or apparently under 14 years of age must have permits and wear badges, to be obtained from the district superintendent of the board of education, before being permitted to sell newspapers.

In specifying the industries to which this legislation applies it has been necessary for the purpose of comparison to arrange them into three groups, namely: (1) Factories and mechanical establishments, (2) mercantile establishments, and (3) mines and smelting works. The legislation in any one State does not necessarily relate to all of the industries that may be included in one group. Thus, the first group may relate to one or more industries, such as factories, manufacturing and mechanical establishments, workshops, printing offices, etc.; the second group may include all mercantile establishments, retail stores, hotels, restaurants, messenger services, etc., or only one or more of these industries; the third group may include only coal mines, or coal and metalliferous mines, or it may include all mines and smelting and refining works.

EMPLOYMENT DURING SCHOOL TIME.

A large number of States have, in addition to an absolute age limit, a specified age under which children can not be employed either in all or in certain industries, except during vacation, unless they have attended school the year preceding, as required by law, or are attending night school, or have complied with certain other prescribed conditions as to school attendance or education. This age usually corresponds to that prescribed for compulsory school attendance. Twenty-two States have laws of this character. Of these, Maine, New Jersey, Ohio, Vermont, and Washington fix the age limit at 15 years, under which age persons can not be employed unless certain conditions of school attendance have been complied with. In New Jersey the law applies to employment in factories, workshops, and mines; in Washington, to employment in manufacturing, mechanical, or mercantile establishments or by telegraph and telephone companies; in Maine, to employment in manufacturing or mechanical establishments; in Vermont, to employment in mills or factories. In Ohio employment is prohibited, during the school term, of children under 15 in mines, and

under 14 in all vocations not already included within the scope of the absolute age-limit law above mentioned. The States of Arkansas, Colorado, Connecticut, Illinois, Louisiana, Massachusetts, Montana, Nebraska, New Hampshire, New York, North Dakota, Ohio, Oregon, South Dakota, and Wisconsin fix the age limit at 14 years. Of these, Colorado, Connecticut, Illinois, Massachusetts, Montana, New York, Ohio, Oregon, and Wisconsin have an absolute age limit of 14 years for certain classes of industries as above mentioned, but the legal requirement concerning school attendance, etc., must be complied with before children under 14 years can be employed in any other class of work. In Louisiana the absolute age limit for employment in factories and workshops is 12 for boys and 14 for girls, but children of either sex under 14 years of age must have attended school at least four of the twelve months next preceding employment in factories or workshops. Of the other States, in Arkansas, New Hampshire, North Dakota, and South Dakota the 14-year age limit with regard to employment during school time applies to all occupations; in Nebraska, to the manufacturing, mechanical, or mercantile industries. In Rhode Island children under 13 are prohibited from being employed in any service or business except during vacation. In Pennsylvania children under 16 years of age must show that they have attended school as required by law before they can be employed in any way.

EMPLOYMENT OF ILLITERATES.

In twenty States age limits are prescribed under which children are prohibited from being employed unless they are able to read and write the English language. Of these Colorado, Connecticut, Illinois, Indiana, Kansas, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New York, Ohio, Oregon, Pennsylvania, and Washington fix the age limit at 16 years under which illiterate children can not be employed except during school vacation, unless they attend evening school or comply with other educational requirements. In Arkansas this age limit is 16 in the case of mine employees and 14 in the case of children employed in factories. In Colorado and Kansas the prohibition applies only to employment in mines; in Michigan to employment in manufacturing establishments, hotels, and stores. In the remaining nine States above mentioned the prohibition applies to children under 16 years of age in all industries. Four States fix the age of illiterates at 14 years—Maryland and Missouri for employment in mines only, Texas for employment in establishments using machinery, and Vermont for employment in any industry.

DANGEROUS, INJURIOUS, OR IMMORAL OCCUPATIONS.

The laws included in this group are mostly such as are directed against the use of children as performers in circuses or theaters, in

peddling or mendicant occupations, in barrooms, for immoral purposes, and in dangerous or injurious occupations generally. In the other classes of child-labor laws usually the employers alone are liable for the violations. In the laws included within this group any person having the care, custody, or control of a child and exhibiting, using, or employing the same, or selling, apprenticing, giving away, or otherwise disposing of the child for the purposes prohibited by the law, is also made liable.

Thirty-two States and Territories have enacted laws which come within this group. Of these, fourteen have statutes prohibiting the employment of children in selling or handling intoxicating liquors or working in places where they are sold or handled. The age limits prescribed are: All minors in Alaska, Connecticut, and Georgia; 21 years in South Dakota and Vermont; 18 years in Massachusetts; 16 years in Maryland and Texas; 15 years in Pennsylvania and West Virginia, and 14 years in Colorado, Illinois, Wisconsin, and Wyoming.

These laws differ widely in their scope and purpose. In Pennsylvania and West Virginia the law prohibits the employment of children of the age specified above for the purpose of singing, dancing, acting, or in any manner exhibiting in dance houses, concert saloons, theaters, or places of entertainment where intoxicants are sold or given away or with which any place for the sale of wines or spirituous or malt liquors is directly or indirectly connected by any passageway or entrance. In Colorado and Wyoming the prohibition applies to employment as actors or performers in concert halls or rooms where intoxicating liquors are sold or given away. In Maryland and Massachusetts employment of children is prohibited in saloons and in business and bottling establishments where intoxicating liquors are sold or handled. In Georgia minors may not be employed in any capacity in places where liquor is sold to be drunk on the spot; in Vermont, on premises or in rooms in which a liquor license is operated, except in hotels, restaurants, and drug stores; in South Dakota, in connection with any place or room where intoxicating liquors are sold, and in Connecticut, in saloons where spirituous and intoxicating liquors are kept for sale. In Alaska minors are prohibited from dispensing intoxicating liquors. In Illinois, theaters, concert halls, and places of amusement where intoxicating liquors are sold, and in Wisconsin, barrooms and beer gardens are included in a list of places in which the employment of children under 14 years of age is prohibited. In Texas the prohibition applies only to employment in distilleries and breweries.

The other laws concerning this class of occupations vary greatly as regards both the age limit of children and the character of the occupations prohibited. Following are the age limits prescribed in the different States and Territories under which children are prohibited from being employed in the vocations specified below: 12 years, Con-

necticut, Georgia, and Porto Rico; 14 years, California, Colorado, District of Columbia, Illinois, Kansas, Maryland, Missouri, New Hampshire, Ohio, Virginia, Wisconsin, and Wyoming; 15 years, Delaware, Indiana, Louisiana, and Massachusetts; 16 years, Kentucky, Michigan, Minnesota, Montana, New York, and Rhode Island; 18 years, New Jersey; in Pennsylvania and West Virginia the age limit is 18 in the case of children employed in singing or playing on musical instruments on the streets and in begging and mendicant occupations, and 15 in the case of the other occupations specified.

It is not practicable in this summary to give in detail all the variations that are found in these laws in the different States. The analysis will, therefore, be confined to the more important groups of occupations to which the prohibition relates.

The occupations of rope or wire walker, gymnast, contortionist, rider, acrobat, etc., are prohibited for children of specified age in all but one of the above-mentioned States and Territories.

Dancing for exhibition is prohibited for children under a specified age in California, Delaware, Illinois, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ohio, Rhode Island, and Wyoming.

Performing in theaters is prohibited in New York and Rhode Island; in variety theaters, in Colorado and Wyoming, and in theaters, etc., where intoxicants are sold or given away, in Colorado, Illinois, Pennsylvania, West Virginia, and Wyoming.

Singing or playing on a musical instrument in public as a vocation for children is prohibited in California, Illinois, Maryland, Massachusetts, Missouri, Montana, New Hampshire, New Jersey, New York, Ohio, Rhode Island, and Wyoming. In the District of Columbia, Indiana, Kansas, Pennsylvania, and West Virginia these occupations are prohibited only on the public streets.

Begging and mendicant occupations for children are prohibited in California, Delaware, District of Columbia, Georgia, Indiana, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Montana, New Jersey, New York, Ohio, Pennsylvania, Porto Rico, Rhode Island, Virginia, West Virginia, and Wyoming.

Peddling or wandering occupations for children are prohibited in California, Connecticut, Illinois, Kentucky (for girls), Maryland, Missouri, Montana, New Jersey, New York, Ohio, Porto Rico, Rhode Island, Virginia, and Wyoming.

In Wisconsin no female under 18 years of age may be employed as a messenger by any telegraph or telephone company.

A number of the States prohibit the exhibition of deformed or weak-minded children; the employment of children in collecting rags, bones, cigar stumps, or refuse; employment for prostitution; or their retention in assignation houses or brothels.

Twenty-two of the above-mentioned States and Territories have, in addition to and in connection with the above, general provisions prohibiting the employment of children in occupations, exhibitions, or places dangerous or injurious to life, limb, health, or morals.

In nearly all States where acting, singing, playing on musical instruments, etc., in theaters, halls, etc., are prohibited for children, exceptions are made in the case of church, school, or similar entertainments, or discretion is given to the local authorities to grant special permission.

EMPLOYMENT IN DANGEROUS OPERATIONS.

Many States have enacted laws prohibiting in general terms the employment of children in dangerous operations. A number of States have, however, special statutory provisions prohibiting children from cleaning dangerous machinery while in motion, operating dangerous or injurious machinery, or running elevators.

Cleaning machinery in motion is prohibited for minors in West Virginia, for males under 18 and females under 21 years in Michigan and New York, for males under 16 and females under 18 years in Indiana, for children under 16 in Pennsylvania and Rhode Island, and for children under 14 in Massachusetts.^a Operating or assisting in operating dangerous machinery is prohibited for children under 16 years of age in New York; cleaning machinery in motion or working between the fixed and traversing parts of machinery in motion is prohibited for minors in Missouri and New Jersey; cleaning machinery in motion by males under 16 and females under 18 and operating or assisting in operating dangerous machinery on the part of children under 16 years of age is prohibited in Iowa, and operating or cleaning machinery in motion is prohibited for children under 12 years of age in Louisiana.

In New York children under 18 years of age are not permitted to be employed in any factory in operating or using any emery, tripoli, rouge, corundum, stone, carborundum, or any abrasive or emery polishing or buffing wheel where articles of the baser metals or of iridium are manufactured.

An Illinois statute specifies a long list of dangerous operations in which children under 16 years of age are not permitted to be employed. These include, among others, sewing belts, adjusting belts to machinery, oiling or cleaning machinery; operating circular or band saws, planers, sandpaper or wood-polishing machinery, emery or polishing wheels, wood turning or boring machinery, stamping machines in sheet metal, tinware, or washer and nut factories, corrugating rolls, elevators, steam boilers, steam machinery, cracker machinery, wire or

^a In Massachusetts no machinery, except steam engines in factories, may be cleaned while running by either a child or an adult if objection is made in writing by the city inspector.

iron straightening machinery, rolling-mill machinery, laundry machinery; setting up pins in bowling alleys; preparing compositions in which dangerous or poisonous acids are used, manufacturing paints, colors, or white lead, etc. The operation, management, care, or custody of elevators on the part of children is prohibited in 10 States. For this purpose the age limit in Ohio is fixed at 20, and in Rhode Island at 18; in Massachusetts, at 18 for elevators running over 100 feet per minute and at 16 for slower elevators; in Minnesota, at 18 for elevators running over 200 feet per minute and at 16 for other elevators; in New York, at 18 for elevators running over 200 feet per minute and at 15 for other elevators. In Connecticut, Illinois, Indiana, and Wisconsin the age limit is 16 years and in Pennsylvania it is 14 years; below these ages children are not permitted to be in charge of or to operate elevators. In New York the prohibition applies only to elevators in factories, and in Rhode Island it applies to passenger elevators only. In the other States the statutes apply to all elevators.

HOURS OF LABOR.

Twenty-nine States and Territories have passed laws limiting the hours of labor of children. The age limit of children in these cases varies from 12 to 21 years, and the hour limit ranges from 8 per day to 66 per week. In some cases the prohibition is general, in others it applies to one or more classes of industries. The following statutory limitations have been placed upon the hours per day or per week during which children may be employed in the different States:

Six hours per day, three in the morning and three in the afternoon: For children under 16 years of age in agricultural factories and manufacturing establishments in Porto Rico.

Eight hours per day: For children under 16 years of age in factories, stores, mines, or other occupations which may be deemed unhealthful or dangerous, in Colorado, and for children under 18 years of age in cigar factories in Indiana. In Wisconsin children under 18 years may not be compelled to work over 8 hours per day in manufacturing establishments.

Eight hours per day or 48 hours per week: For children under 16 years of age in any gainful occupations in Illinois.

Nine hours per day: For boys under 14 and girls under 16 years of age in all occupations except agricultural and domestic service and clerks in stores in Michigan, and for children under 16 years of age in factories in New York.

Nine hours per day or 54 hours per week: For children under 18 years of age in any manufacturing or mercantile establishment or any other place of labor in California, and for children under 16 years of age in mercantile establishments, business offices, hotels, etc., in towns of 3,000 or more inhabitants in New York.

Ten hours per day: For children under 18 years of age in cotton and woolen factories in Indiana; for children under 16 years by any corporation in Maine; for children under 16 years in factories in Maryland and in mercantile establishments in Baltimore; for children under 15 years in manufacturing establishments in Vermont; for children under 14 years in all occupations except agriculture and domestic service in Minnesota, and in manufacturing establishments in Virginia, North Dakota, Oklahoma, and South Dakota. In Minnesota children under 16 and in North Dakota, Oklahoma, and South Dakota children under 18 years of age may not be compelled to work more than 10 hours in the industries mentioned.

Ten hours per day or fifty-five hours per week: For children under 18 years in manufacturing, mercantile, or other establishments in Ohio and in manufacturing establishments in New Jersey.

Ten hours per day or fifty-eight hours per week: For children under 18 years of age in Massachusetts and under 16 years in Rhode Island in manufacturing establishments.

Ten hours per day or sixty hours per week: For males under 18 and females under 21 years of age in manufacturing establishments in Michigan; for children under 18 years of age in manufacturing establishments and telegraph and telephone offices in Louisiana, and in manufacturing establishments in New Hampshire; for children between 16 and 18 years of age in factories in New York, and for females between 16 and 21 years of age in mercantile establishments, business offices, hotels, etc., in towns of 3,000 or more inhabitants in New York, except in mercantile establishments from December 15 to January 1; for females under 18 and males under 16 years of age in manufacturing establishments in Maine; for children under 16 years of age in manufacturing and mercantile establishments in Connecticut and Indiana, and for children under 14 years of age in manufacturing establishments in Arkansas.

Ten hours per day and six days per week: For children under 16 years of age in any occupation in Oregon and Wisconsin.

Twelve hours per day or sixty hours per week: For minors in manufacturing and mercantile establishments, bakeries, laundries, renovating works, and printing offices in Pennsylvania.

Sixty-six hours per week: For children under 18 years of age in North Carolina and 12 years of age in Alabama in manufacturing establishments.

From sunrise to sunset with the customary hours for meals: For persons under 21 years of age in manufacturing establishments other than cotton and woolen mills in Georgia. The law provides that all contracts for longer time are null and void, but makes no other prohibitory provision.

In a number of the above-mentioned States the statutes require that

an interval of one-half or one hour during the working day be given to children for lunch or rest. Where the hours of labor per day are limited, especially in factories, a proviso is usually made that the hours per day may be extended in order to make repairs, etc., or to shorten one day of the week.

NIGHT WORK.

Eighteen States have statutory provisions prohibiting children from working at night. The hours during which work is prohibited are as follows:

For minors, between 10 p. m. and 6 a. m. in manufacturing establishments in Massachusetts.

For children under 18 years of age, between 6 p. m. and 7 a. m. in manufacturing establishments and between 7 p. m. and 7 a. m. in bakeries in New Jersey; between 9 p. m. and 6 a. m. in manufacturing establishments in New York; and between 9 p. m. and 5 a. m., except during time required on Sunday for setting sponge for the next day, in bakeries in Pennsylvania.

For males under 18 and females under 21, between 10 p. m. and 7 a. m. in mercantile establishments, except on Saturday, and from December 15 to January 1, in New York.

For males under 16 and females under 18, between 7 p. m. and 6 a. m. in manufacturing and mercantile establishments in Ohio.

For children under 16 years of age, between 9 p. m. and 6 a. m. in all gainful occupations in Wisconsin; between 7 p. m. and 6 a. m. in all gainful occupations in Illinois and Oregon, and in Minnesota in all occupations outside the family, except that children from 14 to 16 years of age may be employed in mercantile establishments on Saturdays and 10 days before Christmas until 10 p. m.; between 6 p. m. and 6 a. m. in manufacturing establishments in Michigan; between 8 p. m. and 5 a. m. in bakeries in Washington, and between 9 p. m. and 5 a. m. in bakeries in Missouri.

For children under 14 years of age, between 7 p. m. and 6 a. m. in manufacturing and mercantile establishments in Massachusetts, and in manufacturing establishments in Arkansas; between 6 p. m. and 6 a. m. in manufacturing establishments in Texas; and between 6 p. m. and 7 a. m. in manufacturing establishments and mines in Virginia.

For children under 13 years of age, between 7 p. m. and 6 a. m. in manufacturing establishments in Alabama.

For children under 12 years of age, between 8 p. m. and 6 a. m. in manufacturing establishments and mines in South Carolina. They may, however, work until 9 p. m. to make up for lost time.

In New York children under 14 years of age are prohibited from selling newspapers in cities of the first class after 10 p. m.

In Georgia contracts for the employment of persons under 21 years

of age between sunset to sunrise in manufacturing establishments other than cotton and woolen mills are null and void, but no other prohibitory provision is made.

OTHER CHILD LABOR LEGISLATION.

Some of the child-labor laws not included above are statutes relating to the earnings of minors in California, Idaho, Iowa, Minnesota, Montana, New York, North Dakota, Ohio, Oklahoma, Porto Rico, South Carolina, South Dakota, Utah, and Washington; prohibiting the corporal punishment of minor employees, in Georgia; engaging minors to leave the State without the consent of the parents or guardians, in North Carolina; enticing minors from parents or guardians for the purpose of employment, in Mississippi; prohibiting the employment of children in basements of mercantile establishments, in New York; prohibiting the withholding of children's wages on account of presumed negligence, alleged incompetence, failure to comply with rules, etc., in Ohio; prohibiting children under 16 years of age from mining or loading coal underground unless in company with a person over 16 years of age, in Pennsylvania; prohibiting compulsion of children under 16 years of age by inhumane treatment to work or study, in Porto Rico. Statutes recently enacted in Alabama and Georgia make it a misdemeanor, on the ground of vagrancy, for any person able to work to fail to work, but instead to hire out his minor children and live upon their wages.

ENFORCEMENT OF CHILD LABOR LAWS.

In nearly all cases violations of child-labor laws are deemed misdemeanors, and penalties are provided accordingly.

In order to insure the proper observance and enforcement of the laws relating to child labor, most of the States having such statutes have in connection therewith provisions requiring employers (1) to obtain certificates, and in some cases affidavits, of parents or guardians showing that the children employed are of the required age; (2) to keep a register of children employed, usually those under 16 years of age, showing name, age, place of residence, etc., or to post such a list in a conspicuous place in the establishment where the children work. Laws limiting the hours of labor or prohibiting night work of children usually have, in addition to the above, provisions requiring employers to post conspicuously in the places where the children are employed notices showing the number of hours the children are required to work. In cases where educational requirements are provided for, employers are usually required to keep on file individual certificates of school authorities showing that the children have attended school as required by law. In some States factory inspectors are empowered to order

the discharge of children when they have reason to doubt their age or when they consider them physically unfit for the work required.

Following are the laws relating to child labor enacted in the United States and in force at the close of the year 1903.

ALABAMA.

CODE OF 1896.

CIVIL CODE.

CHAPTER 78.—*Employment in mines.*

SECTION 2933. No * * * boy under the age of twelve years, shall be employed to work or labor in or about any mine in this State.

ACTS OF 1903.

ACT No. 57.—*Age limit—Night work—Hours of labor.*

SECTION 1. No child under the age of twelve (12) years shall be employed in or about any factory or manufacturing establishment within this State unless a widowed mother or aged or disabled father is dependent upon the labor of such child, or in case a child is an orphan and has no other means of support. No child under the age of ten (10) years shall be so employed under any circumstances.

SEC. 2. It shall be unlawful for any factory or manufacturing establishment to hire or to employ any child unless there is first provided and placed on file in the office of such employer an affidavit signed by the parent or guardian or person standing [in] parental relation thereto, certifying the age and date of birth of said child; any person knowingly furnishing a false certificate of the age of such child shall be deemed guilty of a misdemeanor, and shall be brought before some justice of the peace or other court or officer having jurisdiction for trial, and upon conviction shall be punished by a fine of not less than five nor more than one hundred dollars, or be sentenced to hard labor for a term not exceeding three months.

SEC. 3. No child under the age of thirteen (13) years shall be employed at labor or detained in any factory or manufacturing establishment in this State between the hours of 7 p. m. and 6 a. m. standard time, and no child under the age of sixteen (16) years shall be so employed or detained between said hours for more than forty-eight hours in any one week; and no child under the age of twelve shall be employed or detained in any factory or manufacturing establishment for more than sixty-six (66) hours in any one week.

SEC. 4. Any person, persons or corporation or representative of such corporation who violates any of the provisions of this act, or who willfully or knowingly suffers or permits any child to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not more than (\$200) two hundred dollars.

ACT No. 229.—*Employment while parent lives in idleness.*

SECTION 1. * * * Any person who is able to work, and who does not work but hires out his minor children and lives upon their wages; * * * is hereby declared to be a vagrant and must on conviction be fined not more than five hundred (\$500) dollars and may also be imprisoned in the county jail or sentenced to hard labor for the county for not more than six months. *Provided*, That it shall be a sufficient defense to the charge of vagrancy under any of the provisions of this act that the defendant has made bona fide efforts to obtain employment at reasonable prices for his labor, and has failed to obtain the same. The provisions of this act shall not apply to persons who are idle under strike orders or lockouts.

ARKANSAS.

DIGEST OF 1894.

CHAPTER 109.—*Employment in mines.*

SECTION 5051. No person under the age of fourteen years, or female of any age, shall be permitted to enter any mine to work therein; nor shall any boy under the age

of sixteen years, unless he can read and write, be allowed to work in any mine, and no owner, agent or operator of any mine operated by a shaft or slope shall place in charge on any engine whereby men are lowered into or hoisted out of the mines, any but an experienced, competent and sober person, not under eighteen years of age, and no person shall be permitted to ride upon a loaded cage or wagon used for hoisting purposes in any shaft or slope, except persons employed for that purpose, and in no case shall more than eight persons ride in any cage or car at any one time, nor shall any coal be hoisted out of any mine while any person or persons are descending into such mine, and in no case shall more than one of the same family ascend or descend on a cage and not more than eight persons ascend out of or descend into any mine on one cage at one time, nor shall they be lowered or hoisted more rapidly than five hundred feet to the minute.

ACTS OF 1903.

Act No. 127.—*Age limit—Night work—Hours of labor—Illiterates—School attendance.*

SECTION 1. No child under the age of twelve (12) years shall be employed in or about any factory or manufacturing establishment within this State, unless a widowed mother or totally disabled father is dependent upon the labor of such child, or in case a child is an orphan and has no other means of support. No child under the age of ten (10) years shall be so employed under any circumstances.

Sec. 2. It shall be unlawful for any factory or manufacturing establishment to hire or employ any child unless there is first provided and placed on file in the office of such employer an affidavit signed by the parent or guardian or person standing in parental relation thereto, certifying the age and date of birth of said child; any person knowingly furnishing a false certificate of the age of such child shall be deemed guilty of perjury, and upon conviction thereof, shall be punished as provided by law in all cases of perjury.

Sec. 3. No child under the age of fourteen (14) shall be employed at labor or detained in any factory or manufacturing establishment in this State between the hours of 7 p. m. and 6 a. m. or for more than sixty (60) hours in any one week or more than ten (10) hours in any one day.

Sec. 4. No child under the age of fourteen (14) shall be employed at labor in or about any factory or manufacturing establishment unless he or she can read and write his or her name and simple sentences in the English language.

Sec. 5. No child under the age of fourteen (14) years shall be employed at labor in or about any factory or establishment, unless such child attends school for at least twelve weeks of each year—six weeks of said schooling to be consecutive—the year to be counted from the last birthday of the child preceding such employment; and at the end of every year a certificate to the effect that the law has been complied with, signed by the teacher of the school or schools attended by the child during said year must be produced by the parent or person standing in parental relation to said child, and filed by the employer of said child. All such certificates shall be open to public inspection.

Sec. 6. Any person, persons, corporation or representative of such corporation who violates any of the provisions of this act, or who suffers or permits any child to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine of not more than five hundred dollars (\$500).

CALIFORNIA.

DEERING'S CODES AND STATUTES—1885.

VOL. II.—CIVIL CODE.

Earnings of minors.

SECTION 212. The wages of a minor employed in service may be paid to him until the parent or guardian entitled thereto gives the employer notice that he claims such wages.

VOL. IV.—PENAL CODE.

Certain employments forbidden.

SECTION 272 (as amended by chapter 158, acts of 1901). Any person, whether as parent, relative, guardian, employer, or otherwise, having the care, custody, or con-

trol of any child under the age of fourteen years, who exhibits, uses, or employs, or in any manner, or under any pretense, sells, apprentices, gives away, lets out, or disposes of any such child to any person, under any name, title, or pretense, for or in any business, exhibition, or vocation, injurious to the health or dangerous to the life or limb of such child, or in or for the vocation, occupation, service, or purpose of singing, playing on musical instruments, rope or wire walking, dancing, begging, or peddling, or as a gymnast, acrobat, contortionist, or rider, in any place whatsoever, or for or in any obscene, indecent or immoral purposes, exhibition, or practice whatsoever, or for or in any mendicant or wandering business whatsoever, or who causes, procures, or encourages such child to engage therein, is guilty of a misdemeanor, and punishable by a fine of not less than fifty nor more than two hundred and fifty dollars, or by imprisonment in the county jail for a term not exceeding six months, or by both such fine and imprisonment. Nothing in this section contained applies to or affects the employment or use of any such child, as a singer or musician in any church, school, or academy, or the teaching or learning of the science or practice of music; or the employment of any child as a musician at any concert or other musical entertainment, on the written consent of the mayor of the city or president of the board of trustees of the city or town where such concert or entertainment takes place.

SEC. 273 (added by chapter 158, acts of 1901). Every person who takes, receives, hires, employs, uses, exhibits, or has in custody, any child under the age, and for any of the purposes mentioned in the preceding section, is guilty of a like offense, and punishable by a like punishment as therein provided.

SEC. 273e (added by chapter 158, acts of 1901). Every telephone, special-delivery company or association, and every other corporation or person engaged in the delivery of packages, letters, notes, messages, or other matter, and every manager, superintendent, or other agent of such person, corporation, or association, who sends any minor in the employ or under the control of any such person, corporation, association, or agent, to the keeper of any house of prostitution, variety theatre, or other place of questionable repute, or to any person connected with, or inmate of, such house, theatre, or other place, or who permits such minor to enter such house, theatre, or other place, is guilty of a misdemeanor.

ACTS OF 1901.

CHAPTER 205.—*Hours of labor—Age limit.*

SECTION 1. No minor under the age of eighteen shall be employed in laboring in any manufacturing, mechanical or mercantile establishment, or other place of labor, more than nine hours in one day, except when it is necessary to make repairs to prevent the interruption of the ordinary running of the machinery, or when a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week; and in no case shall the hours of labor exceed fifty-four hours in a week.

SEC. 2. No child under twelve years of age shall be employed in any factory, workshop or mercantile establishment, and every minor under sixteen years of age when so employed shall be recorded by name in a book kept for the purpose, and a certificate (duly verified by his or her parent or guardian, or if the minor shall have no parent or guardian, then by such minor, stating age and place of birth of such minor) shall be kept on file by the employer, which book and which certificate shall be produced by him or his agent at the requirement of the commissioner of the bureau of labor statistics.

SEC. 3. Every person or corporation employing minors under sixteen years of age in any manufacturing establishment, shall post and keep posted in a conspicuous place in every room where such help is employed, a printed notice stating the number of hours per day for each day of the week required of such persons, and in every room where minors under sixteen years of age are employed, a list of their names, with their ages.

SEC. 4. Any person or corporation that knowingly violates or omits to comply with any of the foregoing provisions of this act, or who knowingly employs, or suffers or permits any minor to be employed, in violation thereof, shall, on conviction, be punished by a fine of not less than fifty nor more than two hundred dollars, or by imprisonment of not more than sixty days, or by both such fine and imprisonment, for each and every offense.

COLORADO.

CONSTITUTION.

ARTICLE 16.—*Employment in mines.*

SECTION 2. The general assembly * * * shall prohibit the employment in the mines of children under twelve years of age.

MILLS' ANNOTATED STATUTES OF 1891.

CHAPTER 26.—*Employment while school is in session.*

SECTION 417. It shall be unlawful for any person, persons or corporation to employ any child under the age of fourteen years to labor in any business whatever during the school hours of any school day of the school term of the public school in the school district where such child is, unless such child shall have attended some public or private day school where instruction was given by a teacher qualified to instruct in those branches required to be taught in the public school of the State of Colorado, or shall have been regularly instructed at home in such branches, by some person qualified to instruct in the same, at least twelve weeks in each year, eight weeks at least of which shall be consecutive, and shall, at the time of such employment, deliver to the employer a certificate in writing, signed by the teacher, certifying to such attendance or instruction; and any person, persons or corporation who shall employ any child contrary to the provisions of this section shall, upon conviction, be deemed guilty of a misdemeanor, and fined in a sum not less than twenty-five (25) dollars nor more than fifty (50) dollars, and all fines so collected shall be paid into the county treasury, and placed to the credit of the school district in which the offense occurs.

SEC. 420. It shall be the duty of any school director of the district to inquire into all cases of neglect of the duty prescribed in this act, and ascertain from the persons neglecting, the reason, if any, therefor; and he shall forthwith proceed to secure the prosecution of any offense occurring under this act; and any director neglecting to secure such prosecution for such offense, within ten days after a written notice has been served on him by any taxpayer in said district, unless the person so complained of shall be excused by the district board of education for the reasons hereinbefore stated, shall, upon conviction, be deemed guilty of a misdemeanor, and fined in a sum not less than ten nor more than fifty dollars; and such fine, when collected, shall be paid into the county treasury and placed to the credit of the school district in which the offense occurs. All actions for offenses committed under this act shall be prosecuted for in the name of the State of Colorado.

SEC. 422. Two weeks' attendance, at half time or night school, shall be considered within the meaning of the article equivalent to an attendance of one week at a day school.

CHAPTER 85.—*Employment in mines.*

SECTION 3185. * * * No woman or girl of any age, shall be permitted to enter any coal mine to work therein, nor any person under the age of 16 years, unless he can read and write.

ACTS OF 1891.

Certain employments forbidden.

(Page 59. Act approved April 13, 1891.)

SECTION 1. It shall be unlawful for any person having the care, custody or control of any child under the age of fourteen years, to exhibit, use or employ as an actor or performer in any concert-hall or room where intoxicating liquors are sold or given away, or in any variety theatre, or for any illegal, obscene, indecent or immoral purpose, exhibition or practice whatsoever, or for or in any business, exhibition or vocation injurious to the health or dangerous to the life or limb of such child, or cause, procure or encourage such child to engage therein. Nothing in this section contained shall apply to or affect the employment or use of any such child as a singer or musician in any church, school or academy, or at any respectable entertainment, or the teaching or learning the science or practice of music.

SEC. 2. It shall also be unlawful for any person to take, receive, hire, employ, use,

exhibit or have in custody any child under the age and for the purpose prohibited in the first section of this act.

Sec. 5. Any person who shall be convicted of violating any of the provisions of the preceding sections of this act, shall be fined not exceeding one hundred dollars, or be imprisoned in the county jail not exceeding three months, or both, in the discretion of the court; and upon conviction for a second or any subsequent offense, shall be fined not exceeding two hundred dollars, or be imprisoned in the county jail not exceeding six months.

Age of employment of telegraph operators on railroads.

(Page 280. Act approved April 3, 1891.)

SECTION 1. No railroad company operating a line or lines of railroad within this State shall hire or employ any person or persons as telegraph operators for the purpose of receiving or transmitting telegraph messages or train orders for the movement of trains, unless said person or persons are at least eighteen (18) years of age, and who have had not less than one year's experience as a telegraph operator.

Sec. 2. Any railroad company, its officers or agents, violating the provisions of this act, shall be guilty of a misdemeanor, and shall be fined not less than one hundred dollars (\$100) nor more than one thousand dollars (\$1,000) for each and every offense.

ACTS OF 1899.

CHAPTER 136.—*Employment during school term—Illiterates.*

SECTION 1. In districts of the first and second class in this State * * * every parent, guardian or other person having charge of any child between the ages of 8 and 14 years, shall send such child to a public, private or parochial school for the following period: In each school year beginning in September, not less than 20 weeks, at least 10 weeks of which, commencing within the first four weeks of the school year, shall be consecutive; *Provided, however,* That if two reputable physicians within the district shall certify in writing that the child's bodily or mental condition does not permit of its attendance at school, such child shall be exempted during such period of disability from the requirements of this act; *And, provided, further,* That if, in the opinion of the county superintendent of schools, the child is being instructed at home by a person qualified, such a child shall not be required to attend as herein provided. * * *

Sec. 2. No child under the age of 14 years shall be employed by any person, persons, company or corporations during the school term and while the public schools are in session, unless the parent, guardian or person in charge of such child shall have fully complied with section one of this act. Every such employer shall require proof of such compliance, and shall make and keep a written record of the proof given, which shall be subject to the inspection of the truant officer, superintendent of schools, or any school director of the district. Any employer employing any child contrary to the provisions of this section, shall be fined not less than twenty-five nor more than one hundred dollars.

Sec. 3. All minors over the age of 14 years and under the age of 16 years who can not read and write the English language, shall attend school at least one-half day of each day, or attend a public night school, or take regular private instruction from some person qualified, in the opinion of the county superintendent of schools, in which such district or the greater portion of the same lies, until such minor obtains a certificate from such superintendent that he or she can read at sight and write legibly, simple sentences in English. Every employer employing or having in employment any such minor shall exact as a condition of employment the school attendance or instruction required by this section, and shall on request of the truant officer, furnish the evidence that such minor is complying with the requirements of this section. Every employer failing to comply with the requirements of this section as to any minor employed by him or in his employ, shall be fined not less than twenty-five dollars, and not more than one hundred dollars; *Provided,* That any employer with the approval or consent of the county superintendent of schools may make provision for the private instruction of minors in his employ.

ACTS OF 1903.

CHAPTER 138.—*Hours of labor—Age limit.*

SECTION 1. It shall be unlawful for any person, agent, firm, company, copartnership, or corporation to require any child, either boy or girl, of sixteen years of age

or less, to labor or work in any mill, factory, manufacturing establishment, shop or store, or in or about coal or other mines, or any other occupation not herein enumerated which may be deemed unhealthful or dangerous, for a greater number than eight hours in the twenty-four hour day, except in cases where life or property is in imminent danger, or in the week before and following Christmas day: *Provided*, That any child between the age of fourteen and sixteen years coming within the provisions of this act may be exempted from the provisions thereof, if in the opinion of the judge of the county court of the county in which said child resides it would be for its best interests to be so exempted. Application may be made in writing to any county judge by any such child, its parent or guardian, to be granted such exemption, when it shall be the duty of such judge to hear the same and inquire particularly into the nature of the employment sought. No fees shall be charged or collected in any such case.

SEC. 2. All paper mills, cotton mills and factories where wearing apparel for men or women is made, ore reduction mills or smelters, factories, shops of all kinds and stores may be held to be unhealthful and dangerous occupations within the meaning of this act at the discretion of the court.

SEC. 4. Any person who shall take, receive, hire or employ any child under the age of fourteen years in any under-ground works or mine, or in any smelter, mill or factory, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than fifty dollars, nor more than five hundred dollars, and shall be imprisoned in the county jail not less than thirty days, nor more than three months.

SEC. 5. Any person, agent, firm, company, copartnership or corporation which shall violate any of the provisions of this act or shall require a greater number of hours of work or labor than herein specified of any child, either boy or girl, of sixteen years of age or less, in any employment or occupation herein enumerated, or any other which shall be deemed by the courts as unhealthful, shall be deemed guilty of a misdemeanor, and shall be fined in a sum of not less than one hundred dollars (\$100), or more than five hundred dollars (\$500), or be imprisoned in the county jail for not less than two, or more than four months, or by both such fine and imprisonment, in the discretion of the court, for each offense.

SEC. 6. All district attorneys shall be required to make prosecutions for all violations of this act, upon the sworn complaint of any reputable citizen that this act is being violated by any person, firm, company, copartnership or corporation.

CONNECTICUT.

GENERAL STATUTES OF 1902.

CHAPTER 82.—*Certain employments forbidden.*

SECTION 1163. Every person who shall exhibit, use, employ, apprentice, give away, let out, or otherwise dispose of any child under the age of twelve years, in or for the vocation, occupation, service or purpose of rope or wire walking, dancing, skating, bicycling, or peddling, or as a gymnast, contortionist, rider, or acrobat, in any place whatever; or for or in any obscene, indecent, or immoral purpose, exhibition, or practice, whatsoever; or for or in any business, exhibition, or vocation, injurious to the health, or dangerous to the life or limb of such child; or who shall cause, procure, or encourage any such child to engage therein, shall be fined not more than two hundred and fifty dollars, or imprisonment not more than one year, or both. But nothing herein shall prevent the employment of any such child as a singer or musician, in any church or school, or in learning or teaching the science or practice of music.

CHAPTER 130.—*Employment during school time.*

SECTION 2119. Every person who shall employ a child under fourteen years of age during the hours while the school which such child should attend is in session, and every person who shall authorize or permit on premises under his control any such child to be so employed, shall be fined not more than twenty dollars for every week in which such child is so employed.

SEC. 2120. Every parent or other person, having control of a child, who shall make any false statement concerning the age of such child with intent to deceive the town clerk or registrar of births, marriages, and deaths of any town, or the teacher of any school, or shall instruct a child to make any such false statement, shall be fined not more than twenty dollars.

SEC. 2121. The school visitors or the town school committee in every town shall,

once or more in every year, examine into the situation of the children employed in all manufacturing establishments, and ascertain whether all the provisions of this chapter are duly observed, and report all violations thereof to the prosecuting authority.

CHAPTER 132.—*Employment of illiterates.*

SECTION 2147. No person over fourteen and under sixteen years of age, who can not read and write, shall be employed in any town where public evening schools are established unless he can produce every school month of twenty days a certificate from the teacher of an evening school showing that he has attended such school eighteen consecutive evenings in the current school month, and is a regular attendant. Every person who shall employ a child contrary to the provisions of this section shall be fined not more than fifty dollars, and State board of education shall enforce the provisions of this section as provided in section 4707.

CHAPTER 154.—*Employment on elevators.*

SECTION 2614. No person, partnership, or corporation shall permit or employ a person under the age of sixteen years to have the care, custody, operation, or management of an elevator. Every person, partnership, or corporation violating any provision of this section shall forfeit not more than twenty-five dollars for each offense.

CHAPTER 158.—*Employment in barrooms, etc.*

SECTION 2682. No person having a license under the provisions of this title shall employ any minor as bartender, porter, or in any other capacity, in any saloon where spirituous and intoxicating liquors are kept for sale, and upon such employment the county commissioners shall revoke the license of such person. Every person so licensed employing any minor as aforesaid shall be subject to the penalties of section 2712.

CHAPTER 273.—*Hours of labor—Age limit.*

SECTION 4691. No minor under sixteen years of age * * * shall be employed in laboring in any manufacturing, mechanical, or mercantile establishment more than ten hours in any day, except when it is necessary to make repairs to prevent the interruption of the ordinary running of the machinery, or where a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week. Every employer shall post in a conspicuous place in every room where such persons are employed a notice stating the number of hours of work required of them on each day of the week, and the employment of any such person for a longer time in any day than so stated shall be a violation of this section, unless it appears that such employment is to make up for time lost on some previous day of the same week in consequence of the stopping of machinery upon which such person was employed or dependent for employment; but in no case shall the hours of labor exceed sixty in a week. Every person who willfully employs, or has in his employment, or under his charge, any person in violation of this section, and every parent or guardian who permits any such minor to be so employed, shall be fined not more than twenty dollars for each offense. A certificate of the age of a minor, made as provided in section 4705, shall be conclusive evidence of his age upon the trial of any person other than the parent or guardian for violation of any provision of this section.

Sec. 4704. No child under fourteen years of age shall be employed in any mechanical, mercantile, or manufacturing establishment.

Sec. 4705. Every person or corporation employing a child under sixteen years of age in any mechanical, mercantile, or manufacturing establishment shall obtain a certificate showing that the child is over fourteen years of age. Such certificate shall be signed by the registrar of births, marriages, and deaths or by the town clerk of the town where there is a public record of the birth of the child, or by a teacher of the school which the child last attended, or by the person having custody of the register of said school. If the child was not born in the United States and has not attended school in this State, one of the parents or the guardian of the child shall have the date of the birth of the child recorded by the registrar of births, marriages, and deaths, or by the town clerk, where such parent or guardian resides. When applying for a record of the date of birth the parent or guardian shall state under oath to said registrar or town clerk the date and place of birth of the child, and said registrar or town clerk shall demand of the parent or guardian any family record,

passport, or other paper showing the age of the child. Every employer or other person having control of any establishment or premises where children under sixteen years of age are employed, who shall neglect to keep on file the certificates described in this section or to show the same, with a list of the names of such children so employed, to the secretary or an agent of the State board of education, or to an agent of the board of school visitors, town school committee, or board of education, as the case may be, of the town in which the establishment or premises are located, when demanded during the usual business hours, shall be fined not more than one hundred dollars. The fee for recording the birth of a child shall be fifteen cents, to be paid by the parent or guardian of the child. For a certificate of the record the fee shall be fifteen cents.

SEC. 4706. Every person acting for himself, or as agent of a mechanical, mercantile, or manufacturing establishment, who shall employ, authorize, or permit to be employed in such establishment any child, in violation of any provision of section 4704 or 4705, shall be fined not more than sixty dollars, and every week of such illegal employment shall be a distinct offense: *Provided*, That no person shall be punished under this section for the employment of any child, when at the time of such employment the employer shall obtain, and thereafter during such employment keep on file, the certificate provided for in section 4705.

SEC. 4707. It shall be the duty of the State board of education, and the school visitors, boards of education, and town school committees to enforce sections 4704, 4705, and 4706; and for that purpose the State board of education may appoint agents, under its supervision and control, for terms of not more than one year, who shall be paid not to exceed five dollars a day for time actually employed and necessary expenses, and whose accounts shall be approved by said board and audited by the comptroller. The agents so appointed may be directed by said board to enforce the provisions of the law requiring the attendance of children at school and to perform any duties necessary or proper for the due execution of the duties and powers of the board.

DELAWARE.

REVISED CODE OF 1852, EDITION OF 1893.

CHAPTER 131.—*Certain employments forbidden.*

[Page 954, chapter 150, vol. 16, Laws of Delaware.]

SECTION 2. Any person having the care, custody, or control of any minor child under the age of fifteen years who shall in any manner sell, apprentice, give away, or otherwise dispose of such minor, or any person who shall take, receive, or employ such child for the vocation or occupation of rope or wire walking or dancing, or as an acrobat or gymnast, or any person who, having the care, custody, or control of any minor child whatsoever, and shall sell, apprentice, give away, or otherwise dispose of such minor, or who shall take, receive, or employ, such minor for begging or any obscure [sic], indecent, or illegal exhibition or vocation, or any vocation injurious to the health or dangerous to the life or limb of such child engaged therein, or for the purpose of prostitution, or any person who shall retain, harbor, or employ any minor child in or about any assignation house or brothel, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any justice of the peace or court of record shall be fined not less than twenty dollars nor more than one hundred dollars for each and every offense.

DISTRICT OF ALASKA.

ACTS OF U. S. CONGRESS, 1898-99.

CHAPTER 429.—TITLE 2.—*Employment in barrooms.*

SECTION 478. No licensee under a barroom license shall employ, or permit to be employed, or allow any * * * minor * * * to sell, give, furnish, or distribute any intoxicating drinks or any admixture thereof, ale, wine, or beer to any person or persons.

DISTRICT OF COLUMBIA.

CODE.

[Approved March 3, 1901; amended January 31 and June 30, 1902.]

Certain employments forbidden.

SECTION 814. * * * Any person, having in his custody or control a child under the age of fourteen years, who shall in any way dispose of it with a view to its being employed as an acrobat, or a gymnast, or a contortionist, or a circus rider, or a ropewalker, or in any exhibition of like dangerous character, or as a beggar, or mendicant, or pauper, or street singer, or street musician; or any person who shall take, receive, hire, employ, use, exhibit, or have in custody any child of the age last named for any of the purposes last enumerated, shall be deemed guilty of a misdemeanor, and, when convicted thereof, shall be subject to punishment by a fine of not more than two hundred and fifty dollars, or by imprisonment for a term not exceeding two years, or both.

FLORIDA.

REVISED STATUTES OF 1892.

PART 5.—TITLE 2.—*Consent of parent when employed.*

SECTION 2733. Whoever hires or employs or causes to be hired or employed any minor, knowing such minor to be under the age of fifteen years and under the legal control of another, without the consent of those having such legal control, for more than sixty days, shall be punished by imprisonment not exceeding sixty days or by fine not exceeding twenty dollars.

GEORGIA.

CODE OF 1895.

VOL. II.—CIVIL CODE.

TITLE 2.—*Age of employment of telegraph operators on railroads.*

SECTION 2237. No railroad company shall employ in this State any telegraph operator to receive and transmit dispatches governing the movements of trains, who is less than eighteen years of age * * *

SEC. 2238. Any railroad company violating the requirements of the preceding section shall forfeit for each offense not less than fifty dollars, and not more than five hundred dollars.

TITLE 3.—*Hours of labor—Corporal punishment.*

SECTION 2619. The hours of labor by all persons under twenty-one years of age, in all [cotton, woolen, or] other manufacturing establishments, or machine shops in this State, shall be from sunrise until sunset, the usual and customary times for meals being allowed from the same; and any contract made with such persons or their parents, guardians, or others, whereby a longer time for labor is agreed upon or provided for, shall be null and void, so far as relates to the enforcement of said contracts against such laborers.

SEC. 2620. No boss or other superior in any manufacturing establishments shall inflict corporeal [corporal] punishment upon minor laborers; and the owners of such factory or machine shop shall be directly liable for all such conduct on the part of their employees; and such minor may sue in his own name for damages for such conduct, and the recovery shall be his own property, and not belong to his parents.

VOL. III.—PENAL CODE.

DIVISION 10.—*Employment in barrooms.*

SECTION 445. If any person keeping or carrying on, either by himself or by another, a barroom, or other place where spirituous liquors are sold by retail to be drunk on the spot, shall employ a minor in such barroom or other place, he shall be guilty of a misdemeanor.

DIVISION 10.—*Employment, while parents live in idleness.*

SECTION 453 (as amended by act No. 394, page 46, acts of 1903).

* * * * *

7. All persons who are able to work and who do not work, but hire out their minor children and live upon their wages, shall be deemed and considered vagrants;

* * * * *

DIVISION 12.—*Certain employments forbidden.*

SECTION 706. Any person who shall sell, apprentice, give away, let out, or otherwise dispose of any child under twelve years, to any person, for the vocation, occupation, or service of rope or wire walking, begging, or as a gymnast, contortionist, circus-rider, acrobat or clown, or for any indecent, obscene or immoral exhibition, practice or purpose, shall be guilty of a misdemeanor.

SEC. 707. Whenever a child shall be disposed of in violation of the preceding section, the person who, under such selling, apprenticing or letting out, shall receive and use such child for any of the purposes condemned in said section, shall be guilty of a misdemeanor.

IDAHO.

CONSTITUTION.

ARTICLE 13.—*Employment in mines.*

SECTION 4. The employment of children under the age of fourteen (14) years in underground mines is prohibited.

CODES—1901.

PART II.—CIVIL CODE.

CHAPTER 79.—*Earnings of minors.*

SECTION 2073. The wages of a minor employed in service may be paid to him, unless within thirty days after the commencement of the service, the parent or guardian entitled thereto gives the employer notice that he claims such wag[e]s.

ILLINOIS.

STARR & CURTIS'S ANNOTATED STATUTES OF 1896.

CHAPTER 38.—*Certain employments forbidden.*

SECTION 131. It shall be unlawful for any person having the care, custody or control of any child under the age of fourteen years, to exhibit, use or employ, or in any manner, or under any pretense, sell, apprentice, give away, let out or otherwise dispose of any such child to any person in or for the vocation or occupation, service or purpose of singing, playing on musical instruments, rope or wire walking, dancing, begging or peddling, or as a gymnast, contortionist, rider or acrobat in any place whatsoever, or for any obscene, indecent or immoral purpose, exhibition or practice whatsoever, or for, or in any business, exhibition or vocation injurious to the health, or dangerous to the life or limb of such child, or cause, procure or encourage any such child to engage therein. Nothing in this section contained shall apply to, or effect [affect] the employment or use of any such child as a singer or musician in any church, school or academy, or in the teaching or learning the science or practice of music.

ACTS OF 1899.

Employment in mines.

(Page 300.)

SECTION 22. No boy under the age of 14 years, and no woman or girl of any age shall be permitted to do any manual labor in or about any mine, and before any boy can be permitted to work in any mine he must produce to the mine manager or operator thereof an affidavit from his parent or guardian or next of kin, sworn and subscribed to before a justice of the peace or notary public, that he, the said boy, is 14 years of age.

ACTS OF 1903.

Age limit—Night work—Illiterates—Certain occupations forbidden.

(Page 187.)

SECTION 1. No child under the age of fourteen years shall be employed, permitted or suffered to work at any gainful occupation in any theatre, concert hall or place of amusement where intoxicating liquors are sold, or in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, passenger or freight elevator, factory or workshop, or as a messenger or driver therefor, within this State. No child under fourteen years of age shall be employed at any work performed for wages or other compensation, to whomsoever payable, during any portion of any month when the public schools of the town, township, village or city in which he or she resides are in session, nor be employed at any work before the hour of seven o'clock in the morning or after the hour of six o'clock in the evening: *Provided*, That no child shall be allowed to work more than eight hours in any one day.

SEC. 2. It shall be the duty of every person, firm or corporation, agent or manager of any firm or corporation employing minors over fourteen years and under sixteen years of age in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theatre, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, within this State, to keep a register in said mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theatre, concert hall or place of amusement, factory or workshop in which said minors shall be employed or permitted or suffered to work, in which register shall be recorded the name, age and place of residence of every child employed or suffered or permitted to work therein, or as messenger or driver therefor, over the age of fourteen and under the age of sixteen years; and it shall be unlawful for any person, firm or corporation, agent or manager, of any firm or corporation to hire or employ, or to permit or suffer to work in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theatre, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, any child under the age of sixteen years and over fourteen years of age, unless there is first produced and placed on file in such mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, factory or workshop, theatre, concert hall or place of amusement, an age and school certificate approved as hereinafter provided.

SEC. 3. Every person, firm or corporation, agent or manager of a corporation employing or permitting or suffering to work five or more children under the age of sixteen years and over the age of fourteen in any mercantile institution, store, office, laundry, hotel, manufacturing establishment, factory or workshop, shall post and keep posted in a conspicuous place in every room in which such help is employed, or permitted or suffered to work, a list containing the name, age and place of residence of every person under the age of sixteen years employed, permitted or suffered to work in such room.

SEC. 4. No child under sixteen years of age and over fourteen years of age shall be employed in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theatre, concert hall, or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, unless there is first produced and placed on file in such mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, factory or workshop, and accessible to the State factory inspector, assistant factory inspector or deputy factory inspector, an age and school certificate as hereinafter prescribed; and unless there is kept on file and produced on demand of said inspectors of factories a complete and correct list of all the minors under the age of sixteen years so employed who can not read at sight and write legibly simple sentences, unless such child is attending night school as hereinafter provided.

SEC. 5. An age and school certificate shall be approved only by the superintendent of schools or by a person authorized by him in writing; or where there is no superintendent of schools by a person authorized by the school board: *Provided*, That the superintendent or principal of a parochial school shall have the right to approve an age and school certificate, and shall have the same rights and powers as the superintendent of public schools to administer the oaths herein provided for children attending parochial schools: *Provided, further*, That no member of a school board or other person authorized as aforesaid shall have authority to approve such certificates for any child then in or about to enter his own establishment, or the employment of a firm or corporation of which he is a member, officer or employee. The person approving these certificates shall have authority to administer the oath provided herein, but no

fee shall be charged therefor. It shall be the duty of the school board or local school authorities to designate a place (connected with their office, when practicable) where certificates shall be issued and recorded, and to establish and maintain the necessary records and clerical service for carrying out the provisions of this act.

Sec. 6. An age and school certificate shall not be approved unless satisfactory evidence is furnished by the last school census, the certificate of birth or baptism of such child, the register of birth of such child with a town or city clerk, or by the records of the public or parochial schools, that such child is of the age stated in the certificate: *Provided*, That in cases arising wherein the above proof is not obtainable, the parent or guardian of the child shall make oath before the juvenile or county court as to the age of such child, and the court may issue to said child an age certificate as sworn to.

Sec. 7. The age and school certificate of a child under sixteen years of age shall not be approved and signed until he presents to the person authorized to approve and sign the same, a school attendance certificate, as hereinafter prescribed, duly filled out and signed. A duplicate of such age and school certificate shall be filled out and shall be forwarded to the State factory inspector's office. Any explanatory matter may be printed with such certificate in the discretion of the school board or superintendent of schools. The employment and the age and school certificates shall be separately printed and shall be filled out, signed, and held or surrendered as indicated in the following forms:

SCHOOL CERTIFICATE.

(Name of school).

(City or town and date).

This certifies (name of minor) of the —th grade, can read and write legibly simple sentences. This also certifies that according to the records of this school, and in my belief, the said (name of minor) was born at (name of city or town) in (name of county) on the (date) and is now (number of years and months) old.

(Name of parent or guardian),

(Residence).

(Signature of teacher) — grade.

(Name of principal).

Correct. (Name of school).

EVENING SCHOOL ATTENDANCE CERTIFICATE.

(Date).

This certifies that (name of minor) is registered in and regularly attends the — evening school. This also certifies that according to the records of my school and in my belief the said (name of minor) was born at (name of city or town) on the — day of (year), and is now (number of years and months) old.

(Name of parent or guardian),

(Residence).

(Signature of teacher).

(Signature of principal).

AGE AND SCHOOL CERTIFICATE.

This certifies that I am (father, mother, guardian or custodian) of (name of minor), and that (he or she) was born at (name of town or city) in the (name of county, if known) and State or county of —, on the (day of birth and year of birth) and is now (number of years and months) old.

(Signature of parent, guardian or custodian),

(City or town and date).

There personally appeared before me the above named (name of person signing) and made oath that the foregoing certificate by (him or her) signed is true to the best of (his or her) knowledge. I hereby approve the foregoing certificate of (name of child), height (feet and inches), weight —, complexion (fair or dark), hair, (color) having no sufficient reason to doubt that (he or she) is of the age therein certified.

OWNER OF CERTIFICATE.

This certificate belongs to (name of child in whose behalf it is drawn) and is to be surrendered to (him or her) whenever (he or she) leaves the service of the corporation or employer holding the same; but if not claimed by said child within thirty days from such time it shall be returned to the superintendent of schools, or where there is no superintendent of schools, to the school board. (Signature of

person authorized to approve and sign, with official character authority) (town, or city and date.)

In the case of a child who can not read at sight and write legibly simple sentences, the certificate shall continue as follows, after the word sentences: "I hereby certify that (he or she) is regularly attending the (name of public or parochial evening school)." This certificate shall continue in force just as long as the regular attendance of said child at said evening school is certified weekly by the teacher and principal of said school.

In any city or town in which there is no public or parochial evening school, an age and school certificate shall not be approved for a child under the age of sixteen years who can not read at sight and write legibly simple sentences. When the public or parochial evening schools are not in session, an age and school certificate shall not be approved for any child who can not read at sight and write legibly simple sentences. The certificate of the principal of a public or parochial school shall be prima facie evidence as to the literacy of the child.

SEC. 8. No person shall employ any minor over fourteen years of age and under sixteen years, and no parent, guardian or custodian shall permit to be employed any such minor under his control, who can not read at sight and write legibly simple sentences, while a public evening school is maintained in the town or city in which such minor resides, unless such minor is a regular attendant at such evening school.

SEC. 9. The State inspector of factories, his assistants or deputies, shall visit all mercantile institutions, stores, offices, laundries, manufacturing establishments, bowling alleys, theatres, concert halls or places of amusement, factories or workshops, and all other places where minors are or may be employed in this State, and ascertain whether any minors are employed contrary to the provisions of this act. Inspectors of factories may require that age and school certificates, and all lists of minors employed in such factories, workshops, mercantile institutions and all other places where minors are employed as provided for in this act, shall be produced for their inspection on demand: *And, provided further*, That upon written complaint to the school board or local school authorities of any city, town, district or municipality, that any minor (whose name shall be given in such complaint) is employed in any mercantile institution, store, office, laundry, manufacturing establishment, bowling alley, theatre, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, contrary to the provisions of this act, it shall be the duty of such school board or local school authority to report the same to the State inspector of factories.

SEC. 10. No person under the age of sixteen years shall be employed or suffered or permitted to work at any gainful occupation more than forty-eight hours in any one week, nor more than eight hours in any one day; or before the hours of seven o'clock in the morning or after the hour of seven o'clock in the evening. Every employer shall post in a conspicuous place in every room where such minors are employed, a printed notice stating the hours required of them each day of the week, the hours of commencing and stopping work, and the hours when the time or times allowed for dinner or for other meals begins and ends. The printed form of such notice shall be furnished by the State inspector of factories, and the employment of any such minor for longer time in any day so stated shall be deemed a violation of this section.

SEC. 11. No child under the age of sixteen years shall be employed at sewing belts, or to assist in sewing belts, in any capacity whatever; nor shall any child adjust any belt to any machinery; they shall not oil or assist in oiling, wiping or cleaning machinery; they shall not operate or assist in operating circular or hand saws, wood-shapers, wood-jointers [wood-jointers], planers, sandpaper or wood-polishing machinery, emery or polishing wheels used for polishing metal, wood-turning or boring machinery, stamping machines in sheet metal and tinware manufacturing, stamping machines in washer and nut factories, operating corrugating rolls, such as are used in roofing factories, nor shall they be employed in operating any passenger or freight elevators, steam boiler, steam machinery, or other steam generating apparatus, or as pin boys in any bowling alleys; they shall not operate or assist in operating dough brakes, or cracker machinery of any description; wire or iron straightening machinery; [n]or shall the [they] operate or assist in operating rolling-mill machinery punches or shears, washing, grinding or mixing mill or calender rolls in rubber manufacturing, nor shall they operate or assist in operating laundry machinery; nor shall children be employed in any capacity in preparing any composition in which dangerous or poisonous acids are used, and they shall not be employed in any capacity in the manufacture of paints, colors or white lead; nor shall they be employed in any capacity whatever in operating or assisting to operate any passenger or freight elevator; nor shall they be employed in any capacity whatever in the manufacture of goods for immoral purposes, or any other employment that may be

considered dangerous to their lives or limbs, or where their health may be injured or morals depraved; nor in any theatre, concert hall, or place of amusement wherein intoxicating liquors are sold; nor shall females under sixteen years of age be employed in any capacity where such employment compels them to remain standing constantly.

SEC. 12. The presence of any person under the age of sixteen years in any manufacturing establishment, factory or workshop, shall constitute *prima facie* evidence of his or her employment therein.

SEC. 13. It shall be the special duty of the State factory inspector to enforce the provisions of this act, and to prosecute all violations of the same before any magistrate or any court of competent jurisdiction in this State. It shall be the duty of the State factory inspector, assistant State factory inspector and deputy State factory inspectors under the supervision and direction of the State factory inspector, and they are hereby authorized and empowered to visit and inspect, at all reasonable times, and as often as possible, all places covered by this act.

SEC. 14. Whoever, having under his control a child under the age of 16 years, permits such child to be employed in violation of the provisions of this act, shall for each offense be fined not less than \$5 nor more than \$25, and shall stand committed until such fine and costs are paid. A failure to produce to the inspector of factories, his assistants or deputies, any age and school certificates, or lists required by this act, shall constitute a violation of this act, and the person so failing shall, upon conviction, be fined not less than \$5 nor more than \$50 for each offense. Every person authorized to sign the certificate prescribed by section 7 of this act, who certifies to any materially false statement therein shall be guilty of a violation of this act, and upon conviction, be fined not less than \$5 nor more than \$100 for each offense, and shall stand committed until such fine and costs are paid. Any person, firm or corporation, agent or manager, superintendent or foreman of any firm or corporation, whether for himself or for such firm or corporation, or by himself or through sub-agents or foreman, superintendent or manager, who shall violate or fail to comply with any of the provisions of this act, or shall refuse admittance to premises, or otherwise obstruct the factory inspector, assistant factory inspector or deputy factory inspector in the performance of their duties, as prescribed by this act, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined not less than \$5 nor more than \$100 for each offense, and shall stand committed until such fine and costs are paid.

INDIANA.

ANNOTATED STATUTES OF 1894—REVISION OF 1901.

CHAPTER 5.—*Hours of labor—Age limit—Certain occupations forbidden—Employment in mines.*

SECTION 2236. Whoever, being the owner, agent, overseer, or foreman of any cotton or woolen factory in this State, employs or permits to be employed, in any cotton or woolen factory of which he is the owner, agent, overseer, or foreman, any person, male or female, under the age of eighteen years, for a longer period than ten hours in any day, shall be fined not more than one hundred dollars nor less than fifty dollars.

SEC. 2237. It shall be unlawful for any person, firm, corporation, company or association engaged in manufacturing iron, steel, nails, metals, machinery or tobacco to employ or keep at work any child under fourteen years of age.

SEC. 2238. It shall be unlawful for any person, firm, company, corporation or association engaged in manufacturing in this State and permitted by law to employ child labor or [omit "or"] to employ or keep at work any child under fourteen years of age more than eight hours per day.

SEC. 2239. Any foreman, clerk, officer, agent or other person who shall violate either of the provisions of this act, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than ten dollars and not more than one hundred dollars.

SEC. 2241. Any person having the care, custody or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away or otherwise dispose of such child, and any person who shall take, receive or employ such child for the vocation or occupation of rope or wire walking, or as an acrobat, gymnast, contortionist, or rider, and any person who, having the care, custody or control of any minor child shall sell, apprentice, give away or otherwise dispose of such child, or who shall take, receive or employ such child for any obscene, indecent

or illegal exhibition or vocation, or any vocation injurious to the health or dangerous to the life or limb of such child engaged therein, or for the purpose of prostitution, and any person who shall retain, harbor or employ any minor child in or about any assignation house or brothel, or in any place where any obscene, indecent or illegal exhibition takes place, shall be guilty of a misdemeanor, and upon conviction thereof before any justice of the peace, mayor, police judge or criminal court shall be fined not less than ten dollars, nor more than one hundred dollars, to which may be added imprisonment not exceeding thirty days.

Sec. 2242. Any person having the care, custody or control, lawful or unlawful, of any minor child under the age of eighteen years, who shall apprentice, give away, let out, hire, or otherwise dispose of such minor to any person for the purpose of singing, playing on musical instruments, begging, or for any mendicant business whatever, in the streets, roads or other highways of the State, and whosoever shall take, receive, hire, employ, use or have in custody any such [minor] for the vocation, occupation, calling, service or purpose of singing, playing upon musical instruments or begging upon the streets, roads or other highways of the State, or for any mendicant business whatever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than five dollars nor more than one hundred dollars, to which may be added imprisonment not exceeding thirty days.

Sec. 2244. Any person who shall take, receive, hire or employ any child under twelve years of age in any underground works, or mines, or like place whatsoever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than five dollars nor more than fifty dollars.

CHAPTER 81.—*Hours of labor—Age limit—Illiterates—Employment on elevators.*

SECTION 7087a. No person under sixteen years of age, and no female under eighteen years of age, employed in any manufacturing or mercantile establishment, laundry, renovating works, bakery or printing office, shall be required, permitted or suffered to work therein more than sixty hours in any one week, nor more than ten hours in any one day, unless for the purpose of making a shorter day on the last day of the week; nor more hours in any one week than will make an average of ten hours per day for the whole number of days which such person or such female shall so work during such week; and every person, firm, corporation or company employing any person under sixteen years of age, or any female under eighteen years of age in any establishment as aforesaid, shall post and keep posted in a conspicuous place in every room where such help is employed a printed notice stating the number of hours of labor per day required of such person for each day of the week, and the number of hours of labor exacted or permitted to be performed by such persons shall not exceed the number of hours of labor so posted as being required. The time of beginning and ending the day's labor shall be the time stated in such notice: *Provided*, That such female under eighteen and persons under sixteen years of age may begin after the time set for beginning and stop before the time set in such notice for the stopping of the day's labor, but they shall not be permitted or required to perform any labor before the time stated on the notices as the time for beginning the day's labor, nor after the time stated upon the notices as the hour of ending the day's labor.

Sec. 7087b. No child under fourteen years of age shall be employed in any manufacturing or mercantile establishment, mine, quarry, laundry, renovating works, bakery or printing office within this State. It shall be the duty of every person employing young persons under the age of sixteen years to keep a register, in which shall be recorded the name, birthplace, age and place of residence of every person employed by him under the age of sixteen years; and it shall be unlawful for any proprietor, agent, foreman or other person connected with a manufacturing or mercantile establishment, mine, quarry, laundry, renovating works, bakery or printing office to hire or employ any young person to work therein without there is first provided and placed on file in the office an affidavit made by the parent or guardian, stating the age, date and place of birth of said young person; if such young person have no parent or guardian, then such affidavit shall be made by the young person, which affidavit shall be kept on file by the employer, and said register and affidavit shall be produced for inspection on demand made by the inspector, appointed under this act. There shall be posted conspicuously in every room where young persons are employed, a list of their names, with their ages, respectively. No young person under the age of sixteen years, who is not blind, shall be employed in any establishment aforesaid, who can not read and write simple sentences in the English language, except during the vacation of the public schools in the city or town where

such minor lives. The chief inspector of the department of inspection shall have the power to demand a certificate of physical fitness from some regular physician in the case of young persons who may seem physically unable to perform the labor at which they may be employed, and shall have the power to prohibit the employment of any minor that can not obtain such certificate.

SEC. 7087d. No person, company, corporation or association shall employ or permit any young person to have the care, custody, management of or to operate any elevator.

CHAPTER 94.—*Employment in mines.*

SECTION 7480. No male person under the age of fourteen years, or female of any age, shall be permitted to enter any coal mine in this State for the purpose of employment therein, and the parents or guardians of boys shall be required to furnish an affidavit as to the age of said boy or boys when there is any doubt in regard to their age; and in all cases of minors applying for work, the owner, operator, agent, or lessee of any coal mine, shall see that the provisions of this section are not violated.

IOWA.

CODE OF 1897, WITH REVISIONS AND ADDITIONS CONTAINED IN SUPPLEMENT OF 1902.

TITLE 12.—CHAPTER 9.—*Employment in mines.*

SECTION 2489. The owner or person in charge of any mine * * * shall not allow a boy under twelve years of age to work in the mines, and, when in doubt regarding the age of one seeking employment, shall, before engaging him, obtain the affidavit of the applicant's parent or guardian in regard thereto. * * *

TITLE 16.—CHAPTER 4.—*Earnings of minors.*

SECTION 3191. Where a contract for the personal services of a minor has been made with him alone, and the services are afterwards performed, payment therefor made to him, in accordance with the terms of the contract, is a full satisfaction therefor, and the parent or guardian can not recover a second time.

TITLE 24.—CHAPTER 10.—*Cleaning machinery in motion—Operating dangerous machinery.*

SECTION 4999-b. * * * No person under sixteen years of age, and no female under eighteen years of age shall be permitted or directed to clean machinery while in motion. Children under sixteen years of age shall not be permitted to operate or assist in operating dangerous machinery of any kind.

KANSAS.

GENERAL STATUTES OF 1901.

CHAPTER 31.—*Certain employments forbidden.*

SECTION 2034. * * * any person having in his custody or control a child under the age of fourteen years, who shall in any way dispose of it with a view to its being employed as an acrobat, or a gymnast, or a contortionist, or a circus-rider, or a rope walker, or in any exhibition of like dangerous character, or as a beggar, or mendicant, or pauper, or street singer, or street musician; or any person who shall take, receive, hire, employ, use, exhibit, or have in custody any child of the age last named for any of the purposes last enumerated, shall be deemed guilty of a misdemeanor, and when convicted thereof shall be subject to punishment by a fine of not more than two hundred and fifty dollars, or by imprisonment for a term not exceeding one year, or both.

CHAPTER 66a.—*Employment in mines.*

SECTION 4140. No person under twelve years of age shall be allowed to work in any coal mine, nor any minor between the ages of twelve and sixteen years unless he can read and write and furnish a certificate from a school teacher, which shall be kept on file, showing that he has attended school at least three months during the year; and in all cases of minors applying for work, the agent of such coal mine shall see

that the provisions of this section are not violated; and upon conviction of a willful violation of this section of this act, the agent of such coal mine shall be fined in any sum not to exceed fifty dollars for each and every offense.

KENTUCKY.

CONSTITUTION.

Regulation of employment.

SECTION 243. The general assembly shall, by law, fix the minimum ages at which children may be employed in places dangerous to life or health, or injurious to morals; and shall provide adequate penalties for violations of such law.

STATUTES OF 1894.

CHAPTER 18.—*Certain employments forbidden.*

SECTION 326. A person who, for gain or reward, employs or causes to be employed, or who exhibits, uses, or who has in his custody for the purpose of exhibiting or employing any child actually or apparently under the age of sixteen years, or any person who, having the care, custody, or control of such child, as parent, relative, guardian, employer, or otherwise, sells, lets out, gives away, or in any way procures or consents for gain or reward to the employment or exhibition of such child, either, first, in begging or receiving alms, or in any mendicant occupation; second, or (being a female) in peddling or in any wandering occupation; third, or male or female in any indecent or immoral occupation or practice, or in the exhibition of any such child when insane or idiotic; or, fourth, in any practice or exhibition of unusual danger to the life, limb, health, or morals of the child, is guilty of a misdemeanor, and shall, for the first offense, be fined not more than twenty dollars, or confined in the county jail or workhouse, in counties having a workhouse, not more than ninety days, or both so fined and confined within the discretion of the court; and, upon conviction for a second, or any subsequent offense, shall be fined in any sum not exceeding one hundred dollars, or imprisoned in the penitentiary for a term not exceeding one year, or both so fined and confined within the discretion of the jury.

ACTS OF 1902.

CHAPTER 16.—*Age limit.*

SECTION 1. It shall be unlawful for a proprietor, foreman, owner or other person to employ any child less than fourteen years of age in any workshop, factory, or mine, in this State; unless said proprietor, foreman or owner shall know the age of the child, it shall be his or their duty to require the parent or guardian to furnish a sworn statement of its age, and any swearing falsely to such by the parent or guardian shall be perjury and punishable as such.

Provided, That if the parent or guardian and the county judge of any county may consent in writing for such employment, then in that event such employment may be made, subject to the approval of the county attorney of said county, in the event of any complaint, and if he thinks after investigation of such complaint, that it is against the best interests or moral welfare of such infant child he may so notify said employer and then this act applies as if no consent was given.

SEC. 2. Any proprietor, foreman or owner employing a child less than fourteen years of age in conflict with the provisions of this act, except where such proprietor, foreman or owner has been furnished with a sworn statement of guardian or parent that the child is more than fourteen years of age, shall be guilty of a misdemeanor, and upon conviction, shall be fined not less than twenty-five dollars and not more than two hundred and fifty dollars.

LOUISIANA.

REVISED LAWS, 1897.

ACT No. 43, ACTS OF 1886.—*Age limit—School attendance—Hours of labor—Time for dinner.*

(Page 515.)

SECTION 1. No boy under the age of twelve years, and no girl under the age of fourteen years, shall be employed in any factory, warehouse or workshop where

the manufacture of any goods whatever is carried on, or where any goods are prepared for manufacturing.

SEC. 2. No child under the age of fourteen years shall be employed by any person to labor in any factory, warehouse, workshop, clothing, dressmaking or millinery establishment, or where any goods are manufactured or prepared for manufacturing, or attend itinerant musicians through the streets of any town or city within this State, unless such child shall have attended some public or private day school, where instruction was given by a teacher qualified to instruct in such branches as are usually taught in primary schools, at least four months of the twelve months next preceding the month in which such child shall be so employed: *Provided*, That a certificate of such attendance from the director of the school district or principal of public or private school in which such child shall have so attended school, shall be evidence of a compliance with the provisions of this section, if acted upon by the employer in good faith. If any such director or principal shall knowingly make a false certificate, he shall be deemed guilty of a violation of this act, and shall be liable to the punishment hereinafter provided.

SEC. 3. Certificates given under the preceding section shall be deposited by the employer at the time of employing such child, and shall be kept by him on file in his office, and shall at all times be subject to inspection by the persons authorized to make inspections under this act.

SEC. 4 (as amended by act No. 49, acts of 1902). No child, or young person under the age of eighteen years, * * * shall be employed in any factory, warehouse, workshop, telephone or telegraph office, clothing, dressmaking or millinery establishment, or in any place where the manufacture of any kind of goods is carried on, or where any goods are prepared for manufacture, for a longer period than an average of ten hours in any day, or sixty hours in any week, and at least one hour shall be allowed in the labor period of each day for dinner.

SEC. 5. Any person who shall violate any of the provisions of this act shall be deemed to be guilty of an offense for each violation thereof, and, upon conviction for the same, shall be punished by a fine of not less than ten nor more than one hundred dollars, or by imprisonment in the parish jail (parish prison in New Orleans) not more than thirty days, or both, in the discretion of the court.

SEC. 7. In all cities it shall be the duty of the superintendent or the chief officer of police, by suitable inspections, to see that the regulations of this act are observed, and also to prosecute all persons who shall violate the same. Such superintendent or chief officer of police shall detail such portion of the force under him as he shall deem necessary for the inspection, from time to time, of all the aforesaid places where such children or young persons may be employed. In towns, the mayor thereof shall perform the duties above imposed on the superintendent or chief officer of police in cities.

SEC. 9. The word "person," wherever used in this act, shall be deemed to mean corporations, as well as individuals.

SEC. 10. * * * Nothing contained in this act shall be construed to apply to domestic or agricultural laborers or industries.

ACT No. 60, ACTS OF 1892.—*Operating or cleaning machinery.*

(Page 516.)

SECTION 1. No child under the age of twelve years shall be permitted to operate or clean any part of the machinery in a factory while such part is in motion by the aid of steam, water or other mechanical power, or to clean any part of such machinery that is in dangerous proximity to such moving part.

SEC. 2. Whoever, either for himself, or superintendent, foreman, overseer or other agent of another, violates the provisions of the preceding section, shall be punished by a fine of not less than ten nor more than twenty-five dollars, or shall be subject to imprisonment for a term not exceeding thirty days, or both at the discretion of the court for each offense.

ACT No. 59, ACTS OF 1892.—*Certain employments forbidden.*

(Page 516.)

SECTION 1. Any person who employs or exhibits or gives away for the purpose of employing or exhibiting a child under fifteen years of age, for the purpose of walking on a wire or rope, or riding or performing as a gymnast, contortionist or acrobat in any circus or theatrical exhibition or in any public place whatsoever or who causes, procures or encourages any such child to engage therein, shall be punished by a fine,

by any committing magistrate, of not less than ten dollars, nor more than twenty-five dollars or shall be subject to a term of imprisonment not exceeding thirty days or both at the discretion of the court.

SEC. 2. No license shall be granted for a theatrical exhibition or public show in which children under fifteen years of age are employed or [as] contortionists, acrobats, or in any feats of gymnast or equestrianism or where in the opinion of the mayor of a city or town authorized to grant licenses, such children are employed in such a manner as to corrupt their morals or impair their physical health.

MAINE.

REVISED STATUTES OF 1883.

CHAPTER 48.—*Employment in cotton or woolen manufactories—School attendance—Hours of labor.*

SECTION 13. No child shall be employed or suffered to work in a cotton or woolen manufactory without having attended a public school, or a private school taught by a person qualified to be a public teacher; if under twelve years of age, for four months, if over twelve and under fifteen, for three months, of the year preceding such employment. A certificate under oath of such teacher, filed with the clerk or agent before employment, is the proof of such schooling.

SEC. 14. Any owner, agent or superintendent of such manufactory, for each violation of the preceding section, forfeits one hundred dollars, to be recovered by indictment, half to the prosecutor and half to the town where the offense was committed, to be added to its school money. Superintending school committees shall inquire into such violations, and report them to the county attorney, who shall prosecute therefor.

SEC. 15. No person under the age of sixteen years shall be employed by any corporation for more than ten hours of a day. Whoever violates this provision forfeits one hundred dollars, half to the town where the offense is committed, and half to the person employed; to be recovered by indictment.

ACTS OF 1887.

CHAPTER 139.—*Hours of labor—Age limit—Employment during school term.*

SECTION 1. No female minor under eighteen years of age, no male minor under sixteen years of age, * * * shall [be] employed in laboring in any manufacturing or mechanical establishment in this State, more than ten hours in any one day, except when it is necessary to make repairs to prevent the interruption of the ordinary running of the machinery, or when a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week; and in no case shall the hours of labor exceed sixty in a week; and no male person sixteen years and over shall be so employed as above, more than ten hours a day during minority, unless he voluntarily contracts to do so with the consent of his parents, or one of them, if any, or guardian, and in such case he shall receive extra compensation for his services: *Provided, however,* Any female of eighteen years of age or over, may lawfully contract for such labor for any number of hours in excess of ten hours per day, not exceeding six hours in any one week or sixty hours in any one year, receiving additional compensation therefor; but during her minority, the consent of her parents, or one of them, or guardian, shall be first obtained.

SEC. 2 (as amended by chapter 220, acts of 1893). Every employer shall post in a conspicuous place in every room where such persons are employed, a notice printed in plain, large type, stating the number of hours' work required of them on each day of the week, the exact time for commencing work in the morning, stopping at noon for dinner, commencing after dinner, and stopping at night; the form of such printed notice shall be furnished by the inspector of factories, workshops, mines and quarries hereafter named, and shall be approved by the attorney-general. And the employment of any such person for a longer time in any day than that so stated, shall be deemed a violation of section one, unless it appears that such employment is to make up for time lost on some previous day of the same week, in consequence of the stopping of machinery upon which such person was employed or dependent for employment.

SEC. 3. Whoever, either for himself, or as superintendent, overseer or agent of another, employs or has in his employment any person in violation of the provisions of section one, and every parent or guardian who permits any minor to be so

employed, shall be punished by a fine of not less than twenty-five dollars nor more than fifty dollars for each offense. A certificate of the age of a minor made by him and by his parent or guardian at the time of his employment, shall be conclusive evidence of his age in behalf of the hirer, upon any prosecution for a violation of the provisions of section one. Whoever falsely makes and utters such a certificate with an intention to evade the provisions of this act, shall be subject to a fine of one hundred dollars.

SEC. 5. No child under twelve years of age, shall be employed in any manufacturing or mechanical establishment in this State. Whoever, either for himself, or as superintendent, overseer or agent of another, employs or has in his employment any child in violation of the provisions of this section, and every parent or guardian who permits any child to be so employed, shall be punished by a fine of not less than twenty-five nor more than fifty dollars for each offense.

SEC. 6. No child under fifteen years of age shall be employed in any manufacturing or mechanical establishment in this State, except during vacations of the public schools in the city or town in which he resides, unless during the year next preceding the time of such employment, he has for at least sixteen weeks, attended some public or private school, eight weeks of which shall be continuous; nor shall such employment continue unless such child in each and every year, attends some public or private school for at least sixteen weeks, and no child shall be so employed who does not present a certificate made under or by the direction of the school committee, superintendent of the public schools, or the teacher of a private school, that such child has so attended school. And it shall be the duty of such committee, superintendent or teacher, to furnish such a certificate in accordance with the fact upon request and without charge. * * *

SEC. 7. Any parent or guardian who procures a child to be employed contrary to section six, and any corporation, owner, superintendent or agent of the owner, of such establishment violating the provisions of said section, shall forfeit the sum of one hundred dollars, one-half to the use of the county, and one-half to the use of the city or town where the offense is committed. Money so recovered to the use of the city or town, shall be added to its school money. It shall be the duties of the school committees and superintendent of public schools, to inquire into violations of said section and report the same to the county attorney, who shall prosecute therefor.

SEC. 8 (as amended by chapter 220, acts of 1893). Every owner, superintendent or overseer of any such manufacturing or mechanical establishment shall require and keep on file, a certificate of the age and place of birth of every child under sixteen years of age employed therein, so long as such child is so employed, which certificate shall also state in the case of a child under fifteen years of age, the amount of his school attendance during the year next preceding such employment. Said certificate shall be signed by a member of the school committee of the place where such attendance has been had, or by some one authorized by such committee, * * *. The inspector of factories, workshops, mines and quarries hereinafter named or either of his assistants, may demand the names of the children under sixteen years employed in such establishment, in the several cities and towns of the State, and may require that the certificates of age and school attendance prescribed in this section, shall be produced for his inspection, and a failure to produce the same, shall be prima facie evidence that the employment of such child is illegal.

MARYLAND.

CODE OF PUBLIC GENERAL LAWS, 1903.

ARTICLE 27.—Hours of labor—Certain employments forbidden—Handling intoxicants—Peddling, etc.

SECTION 217. No child under sixteen years of age shall be employed in laboring more than ten hours a day in any manufacturing business or factory established in any part of the State, or in any mercantile business in the city of Baltimore.

SEC. 218. Any person who shall so employ a child or suffer or permit such employment shall be guilty of a misdemeanor.

SEC. 219. The word "suffer or permit," includes every act or omission, whereby it becomes possible for the child to engage in such labor.

SEC. 309. Any person having in his custody or control a child under the age of fourteen years who shall in any way dispose of it with a view to its being employed as an acrobat, or a gymnast, or a contortionist, or a circus rider, or a rope walker, or in any exhibition of like dangerous character, or as a beggar or mendicant, or street singer, or street musician, and any person who shall take, receive, hire, employ, use,

exhibit or have in custody any child under the age last named for any of the purposes herein enumerated shall be deemed guilty of a misdemeanor and when convicted thereof shall be subject to punishment by fine of not more than one hundred dollars, or by imprisonment for a term not exceeding ninety days in jail, or both.

SEC. 311. No person shall employ a minor under sixteen years of age in handling intoxicating liquors, or in handling packages containing intoxicating liquors, in any brewery or bottling establishment where intoxicating liquors are prepared for sale or offered for sale.

SEC. 312. Whoever violates the provisions of section 311, shall be guilty of a misdemeanor, and on conviction thereof shall in the discretion of the court be fined a sum not less than ten dollars nor more than one hundred dollars, or be imprisoned in jail for not less than five nor more than thirty days, in default of payment of said fine.

SEC. 313. No person engaged in performing upon any musical instrument in, upon or near to any street, lane, alley or highway, or engaged in selling, vending or disposing of any goods, wares or merchandise in, upon or near to any street, lane, alley or highway, or engaged in any business, occupation or calling in, upon or near to any street, lane, alley or highway, and not having a fixed store, shop or place of business at which so engaged, shall have in his possession or company while so engaged, any boy or girl under the age of eight years; and any person violating the provisions of this section shall be punished by a fine not exceeding ten dollars for each and every such offense.

SEC. 398. Any person having in his care, custody or control any child under the age of sixteen years, whether as parent, guardian, relative, employer or otherwise, who shall sell, apprentice, or give away, let out or otherwise dispose of any such child to any person under any name, title or pretense whatever, and any person, whether as parent, guardian, relative, employer or otherwise, who shall take, receive, hire, employ, use or have in custody any such child for the vocation, use, occupation, calling, service or purpose of singing, playing on musical instruments, rope walking, dancing, peddling, begging or any mendicant or wandering business whatsoever, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any competent tribunal, to which such person may be committed for trial, shall be fined not less than fifty nor more than two hundred and fifty dollars, or be imprisoned in a county jail for not less than thirty days nor more than a year, or suffer both such fine and imprisonment in the discretion of the said tribunal; one-half of all fines so imposed to be paid to the informer.

ARTICLE 56.—*Employment in barrooms.*

SECTION 97. It shall not be lawful for any person, or for any club or association, or for any corporation now formed or hereafter to be formed, or for any officer, agent or employee of any such club, association or corporation, to hire or employ any minor to sell or dispense anywhere in the State any beer or spirituous or fermented liquors of any kind at retail, where such beer or liquors are to be drunk upon the premises. Any person violating any provision of this section shall upon conviction be fined a sum not exceeding one hundred dollars.

ARTICLE 77.—*Certificates of age—Illiterates.*

SECTION 160. No proprietor or owner of any mill or factory in Allegany County or the city of Baltimore, other than establishments for manufacturing canned goods, or manager, agent, foreman or other person in charge thereof, shall employ or retain in employment in any such mill or factory any person or persons under sixteen years of age, unless he procures at the time of such employment or retention in employment, and keeps on file and accessible to the attendance officers of said city or county where such minor is employed, a certificate of the principal or head teacher of the school which such child last attended, stating that such child is more than twelve years of age, and a like certificate of the parent or guardian, or other person having control of such child; but the first named certificate need not be procured if such child has not attended school in this State. He shall require such certificates, shall keep them in his place of business during the time the child is in his employment, and shall show the same during his business hours to any attendance officer who may demand to see them, or either of them; and for each failure to comply with any of the provisions of this section he shall be guilty of a misdemeanor, and shall be fined not exceeding one hundred dollars. Whoever continues to employ any such child under sixteen years of age, in violation of this section, after being notified of such violation by an attendance officer, shall for every day thereafter that such unlawful

employment continues be fined not less than five nor more than twenty dollars, in addition to other penalties prescribed by this section for such offenses. A failure to produce on demand to an attendance officer any certificate required by this section shall be prima facie evidence that the child, who is or should have been mentioned in the said certificate, is thus unlawfully employed.

SEC. 161. It shall be the duty of every parent, guardian or other person having control of a child under sixteen years of age, and of every principal or head teacher of said school where such child last attended, to furnish every employer of such child the certificates required by the preceding section. Such certificates, if in substantial conformity with the requirements of that section, shall be prima facie evidence of the facts required to be certified to as therein provided.

SEC. 162. Any parent or guardian or other person having control of a child, or principal or head teacher who shall make any willfully false statement respecting any of the facts required to be certified to as provided in sections 160 and 161 of this subtitle, shall be deemed guilty of a misdemeanor, and shall be fined not more than fifty dollars, or to [sic] be imprisoned not more than thirty days, or suffer both fine and imprisonment in the discretion of the court.

SEC. 163. No person shall employ any minor over twelve and less than sixteen years of age, and no parent, guardian or other person having control of a child, shall permit to be employed or retained in employment any such minor under his control, if the said minor can not read at sight and write legibly simple sentences in the English language while a public evening school is maintained in the city or election district or precinct in which such minor resides, unless such minor is a regular attendant at an evening or other school: *Provided*, That upon presentation by such minor of a certificate signed by a regular practicing physician, and satisfactory to such officer or officers as the school commissioners for such county or city may designate, showing that the physical condition of such minor would render such attendance, in addition to daily labor, prejudicial to health, said officer or officers so designated may issue a permit authorizing the employment of such minor for such period and upon such conditions as said officer or officers so designated as aforesaid may determine. Any person who employs or retains in employment a minor in violation of the provisions of this section shall be deemed guilty of a misdemeanor and be fined for each offense not more than one hundred dollars, which fines shall be paid to the school commissioners for use in supporting evening schools in such city or county. Any parent, guardian or other person having control of a child, who permits to be employed any minor under his control in violation of the provisions of this section, shall be deemed guilty of a misdemeanor and be fined not more than twenty dollars, which fines shall be also paid to the school commissioners for use in supporting evening schools in such city and county.

SEC. 164. In said city or county where attendance officers may have been appointed, it shall be the duty of the school commissioners to designate an attendance officer, who shall once or more frequently in every year examine into the situation of the children employed in such mills and factories in said city or county, and to ascertain whether all the provisions of this subtitle are duly observed and report all violation thereof to the grand jury of the said city or county.

SEC. 165. Attendance officers may visit all establishments where minors are employed in said city or county and ascertain whether any minors are employed therein contrary to the provisions of this subtitle. Attendance officers may require that the certificate provided for in this subtitle of minors employed in such establishments shall be produced for their inspection.

SEC. 166. Any person violating any provision of sections 152-165, where no special provision as to the penalty for such violation is made shall be deemed guilty of a misdemeanor, and be fined not exceeding fifty dollars for each offense. Sections 152-166 are restricted to Baltimore City and Allegany County.

ARTICLE 100.—Hours of labor—Age limit.

SECTION 1. No corporation or manufacturing company engaged in manufacturing either cotton or woolen yarns, fabrics or domestics of any kind, incorporated under the laws of this State, and no officer, agent or servant of such named corporation or manufacturing company, and no person or firm, owning or operating such corporation or manufacturing company within the limits of this State, and no agent or servant of such firm or person, shall require, permit or suffer its, his or their employees in its, his or their service, or under his, its or their control, to work for more than ten hours during each or any day of twenty-four hours, for one full day's work, and shall make no contract or agreement with such employees, or any of them, providing that they or he shall work for more than ten hours for one day's work during

each or any day of twenty-four hours, and said ten hours shall constitute one full day's work.

SEC. 2. Any such named corporation or manufacturing company within the limits of this State shall be allowed, under the provisions of this section, the privilege of working male employees, over the age of twenty-one years, over the limit of ten hours, for the express purpose only of making repairs and improvements, and getting fires made, steam up and the machinery ready for use in their works, which can not be done during the limits of the ten hours, the extra compensation for all such work to be settled between such corporation and manufacturing companies and the employees: *Provided*, That nothing in this article shall be so construed as to prohibit any employer from making a contract with his male employees, over the age of twenty-one years, to work by the hour for such time as may be agreed upon.

SEC. 3. If any such corporation or manufacturing company within the limits of this State, or any officer, agent or servant of such corporation or manufacturing company in this State, shall do any act in violation of any of the provisions of this article he or they shall be deemed to have been guilty of misdemeanor, and shall, on conviction thereof in a court of competent jurisdiction, be fined not less than one hundred dollars for each and every offense so committed, together with the cost of such prosecution, * * *.

SEC. 4. No proprietor or owner of any mill or factory in this State (other than establishments for manufacturing canned goods), or manager, agent or foreman, or other person in charge thereof shall, * * * employ or retain in employment in any such mill or factory, any person or persons under fourteen years of age, unless said child is the only support of a widowed mother, invalid father, or is solely dependent upon such employment for self-support; and if any such proprietor or owner of any such mill or factory, or manager, agent, foreman or other person in charge thereof shall willfully violate the provisions of this section, he shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than one hundred dollars for each and every offense so committed and pay the cost of prosecution, one-half to go to the informer and the other half to the school fund of the county or city in which the offense shall have been committed: *Provided*, That nothing in this section shall apply to Frederick, Washington, Queen Anne's, Carroll, Wicomico, Caroline, Kent, Somerset, Cecil, Calvert, St. Mary's, Prince George's, Howard, Baltimore, Worcester, Garrett, Talbot, Montgomery and Howard counties.

CODE OF PUBLIC LOCAL LAWS, 1888.

ARTICLE 1.—*Employment in mines.*

SECTION 209n (added by chapter 124, acts of 1902) Sub-sec. H. No person under the age of twelve years, or female of any age, shall be permitted to enter any mine to work therein; nor shall any boy under the age of fourteen years, unless he can read and write, be allowed to work in any mine. And the mine boss shall see that this requirement is fully met.

MASSACHUSETTS.

REVISED LAWS OF 1902.

CHAPTER 44.—*Employment of children unlawfully absent from school.*

SECTION 1. Every child between seven and fourteen years of age shall attend some public day school in the city or town in which he resides during the entire time the public day schools are in session, subject to such exceptions as to children, places of attendance and schools as are provided for in section three of chapter forty-two and sections three, five and six of this chapter. * * * Whoever induces or attempts to induce a child to absent himself unlawfully from school, or employs or harbors a child who, while school is in session, is absent unlawfully from school shall be punished by a fine of not more than fifty dollars.

CHAPTER 100.—*Employment in barrooms, etc.*

SECTION 60. Whoever, being the holder of a license for the sale of intoxicating liquors to be drunk on the premises, employs any person under the age of eighteen years to serve such liquors to be drunk on the premises shall be punished by a fine of not more than one hundred dollars.

SEC. 61. Whoever employs a minor under the age of eighteen years in handling

intoxicating liquors or packages containing such liquors in a brewery or bottling establishment in which such liquors are prepared for sale or offered for sale shall, for each offense, be punished by a fine of not less than fifty dollars or by imprisonment for not less than three months, or by both such fine and imprisonment. The provisions of this section shall not prohibit the employment of minors in drug stores.

CHAPTER 106.—*Hours of labor—Night work—Age limit—Illiterates—Time for meals—Certain employments forbidden—Deductions from wages.*

SECTION 23. No child under eighteen years of age * * * shall be employed in laboring in a mercantile establishment more than fifty-eight hours in a week; but the provisions of this section shall not apply during December to persons who are employed in shops for the sale of goods at retail. Every employer shall post in a conspicuous place in every room in which such persons are employed a printed notice stating the number of hours' work which are required of them on each day of the week, the hours of commencing and stopping such work, and the hour when the time or times allowed for dinner or other meals begin and end. The printed form of such notice shall be furnished by the chief of the district police and shall be approved by the attorney-general. The employment of any such person for a longer time in any day than that so stated shall be deemed a violation of the provisions of this section. An employer, superintendent, overseer or other agent of a mercantile establishment who violates any of the provisions of this section shall be punished by a fine of not less than fifty nor more than one hundred dollars.

SEC. 24 (as amended by chapter 435, acts of 1902). No child under eighteen years of age * * * shall be employed in laboring in a manufacturing or mechanical establishment more than ten hours in any one day, except as hereinafter provided in this section, unless a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week; and in no case shall the hours of labor exceed fifty-eight in a week. Every employer shall post in a conspicuous place in every room in which such persons are employed a printed notice stating the number of hours' work required of them on each day of the week, the hours of commencing and stopping work, and the hours when the time allowed for meals begins and ends or, in the case of establishments exempted from the provisions of sections thirty-six and thirty-seven, the time, if any, allowed for meals. The printed forms of such notices shall be provided by the chief of the district police, after approval by the attorney-general. The employment of such person at any time other than as stated in said printed notice shall be deemed a violation of the provisions of this section unless it appears that such employment was to make up time lost on a previous day of the same week in consequence of the stopping of machinery upon which he was employed or dependent for employment; but no stopping of machinery for less than thirty consecutive minutes shall justify such overtime employment, nor shall such overtime employment be authorized until a written report of the day and hour of its occurrence and its duration is sent to the chief of the district police or to an inspector of factories and public buildings.

SEC. 25. A parent or guardian who permits a minor under his control to be employed in violation of the provisions of the two preceding sections and any person, who, either for himself or as superintendent, overseer or agent for another, employs any person in violation of the provisions of said sections or fails to post the notice required by the preceding section or makes a false report of the stopping of machinery under the provisions of said section shall be punished by a fine of not less than fifty nor more than one hundred dollars. A certificate of the age of a minor, made and sworn to by him and by his parent or guardian at the time of his employment in a mercantile establishment, shall be prima facie evidence of his age in any prosecution under the provisions of this section.

SEC. 26. The form of complaint heretofore used may be used in prosecutions under the provisions of section twenty-four, and if substantially followed shall be deemed sufficient, fully and plainly, substantially and formally, to describe the offenses therein set forth; but the provisions of this section shall not be construed to prohibit the use of any other suitable form.

SEC. 27. No person, and no agent or officer of a person or corporation, shall employ a * * * minor in any capacity for the purpose of manufacturing between ten o'clock at night and six o'clock in the morning. Whoever violates the provisions of this section shall be punished by a fine of not less than twenty nor more than fifty dollars for each offense.

SEC. 28. No child under the age of fourteen years shall be employed in any factory, workshop or mercantile establishment. No such child shall be employed at work performed for wages or other compensation, to whomsoever payable, during the

hours when the public schools of the city or town in which he resides are in session, nor be employed at work before six o'clock in the morning or after seven o'clock in the evening.

SEC. 29. No child under sixteen years of age shall be employed in a factory, workshop or mercantile establishment unless his employer procures and keeps on file, accessible to the truant officers of the city or town, and to the district police and inspectors of factories and public buildings, an age and schooling certificate and keeps two complete lists of all such minors employed therein, one on file, and one conspicuously posted near the principal entrance of the building in which such children are employed, and also keeps on file and sends to the superintendent of schools or, if there is no superintendent, to the school committee a complete list of the names of all minors employed therein who can not read at sight and write legibly simple sentences in the English language.

SEC. 30. An age and schooling certificate shall be approved only by the superintendent of schools or by a person authorized by him in writing, or, if there is no superintendent of schools, by a person authorized by the school committee; but no member of a school committee or other person authorized as aforesaid shall approve such certificate for any minor then in or about to enter his own employment or the employment of a firm or corporation of which he is a member, officer or employee. The person who approves the certificate may administer the oath provided for therein, but no fee shall be charged therefor.

SEC. 31. An age and schooling certificate shall not be approved unless satisfactory evidence is furnished by the last school census, the certificate of birth or baptism of such minor, the register of birth of such minor with a city or town clerk, or in some other manner, that such minor is of the age stated in the certificate.

SEC. 32. The age and schooling certificate of a minor under sixteen years of age shall not be approved and signed until he presents the person who is authorized to approve and sign it an employment ticket duly filled out and signed. A duplicate of each age and schooling certificate shall be filled out and shall be kept on file by the school committee. Any explanatory matter may, in the discretion of the school committee or superintendent of schools, be printed with such certificate. The employment ticket and the age and schooling certificate shall be separately printed, and shall be filled out, signed and held or surrendered, as indicated in the following forms:

EMPLOYMENT TICKET, REVISED LAWS, C. 106, SEC. 32.

When [name of minor], height [feet and inches], complexion [fair or dark], hair [color], presents an age and schooling certificate duly signed, I intend to employ [him or her].

(Signature of intending employer or agent.)

(Town or city and date.)

AGE AND SCHOOLING CERTIFICATE, REVISED LAWS, C. 106, SEC. 32.

This certifies that I am the [father, mother, guardian or custodian] of [name of minor], and that [he or she] was born at [name of city or town], in the county of [name of county, if known], and State [or country] of , on the [day and year of birth], and is now [number of years and months] old.

(Signature of father, mother, guardian or custodian.)

(City or town and date.)

Then personally appeared before me the above-named [name of person signing], and made oath that the foregoing certificate by [him or her] signed is true to the best of [his or her] knowledge and belief. I hereby approve the foregoing certificate of [name of minor], height [feet and inches], complexion [fair or dark], hair [color], having no sufficient reason to doubt that [he or she] is of the age therein certified. I hereby certify that [he or she] [can or can not] read at sight and [can or can not] write legibly simple sentences in the English language.

This certificate belongs to [name of minor in whose behalf it is drawn], and is to be surrendered to [him or her] whenever [he or she] leaves the service of the corporation or employer holding the same; but if not claimed by said minor within thirty days from such time, it shall be returned to the superintendent of schools, or, if there is no superintendent of schools, to the school committee.

(Signature of person authorized to approve and sign, with official character or authority.)

(City or town and date.)

In the case of a minor who can not read at sight and write legibly simple sentences in the English language, the certificate shall continue as follows, after the word "language":—

I hereby certify that [he or she] is regularly attending the [name] public evening school. This certificate shall continue in force only so long as the regular attendance of said minor at the evening school is endorsed weekly by a teacher thereof.

Whoever, being authorized to sign the foregoing certificate, knowingly certifies to any materially false statement therein shall be punished by a fine of not more than fifty dollars.

SEC. 33. Whoever employs a minor under sixteen years of age, and whoever having under his control a minor under such age permits such minor to be employed, in violation of the provisions of sections twenty-eight and twenty-nine, shall for such offense be punished by a fine of not more than fifty dollars; and whoever continues to employ a minor in violation of the provisions of either of said sections, after being notified by a truant officer or an inspector of factories and public buildings thereof, shall for every day thereafter that such employment continues be punished by a fine of not less than five nor more than twenty dollars. A failure to produce to a truant officer or inspector of factories and public buildings an age and schooling certificate or list required by law shall be prima facie evidence of the illegal employment of any person whose age and schooling certificate is not produced or whose name is not so listed. A corporation or employer who retains an age and schooling certificate in violation of the provisions of said certificate shall be punished by a fine of ten dollars.

SEC. 34. Truant officers may visit the factories, workshops and mercantile establishments in their several cities and towns and ascertain whether any minors are employed therein contrary to the provisions of this chapter, and shall report any cases of such illegal employment to the school committee and to the chief of the district police or to the inspector of factories and public buildings. Inspectors of factories and public buildings and truant officers may require that the age and schooling certificates and lists of minors who are employed in such factories, workshops or mercantile establishments shall be produced for their inspection. Complaints for offenses under the provisions of this chapter shall be made by inspectors of factories and public buildings.

SEC. 35 (as amended by chapter 183, acts of 1902). While a public evening school is maintained in the city or town in which any minor who is over fourteen years of age and who does not have a certificate signed by the superintendent of schools, or by the school committee, or by some person acting under authority thereof, certifying to the minor's ability to read at sight and write legibly simple sentences in the English language resides, no person shall employ him and no parent, guardian or custodian shall permit him to be employed unless he is a regular attendant at such evening school or at a day school; but, upon presentation by such minor of a certificate signed by a registered practising physician and satisfactory to the superintendent of schools, or, if there is no such superintendent, to the school committee, showing that his physical condition would render such attendance in addition to daily labor prejudicial to his health, said superintendent or school committee shall issue a permit authorizing the employment of such minor for such period as said superintendent or school committee may determine. Said superintendent or school committee, or teachers acting under authority thereof, may excuse any absence from such evening school which arises from justifiable cause. Any minor not holding the certificate described above shall furnish to his employer a record of his school attendance each week while the evening school is in session, and when this record shows unexcused absences from the sessions his attendance shall be deemed irregular according to this act. Whoever employs a minor in violation of the provisions of this section shall forfeit not more than one hundred dollars for each offense to the use of the evening schools of such city or town. A parent, guardian or custodian who permits a minor under his control to be employed in violation of the provisions of this section shall forfeit not more than twenty dollars to the use of the evening schools of such city or town.

SEC. 36. * * * young persons, five or more in number, who are employed in the same factory shall be allowed their meal times at the same hour, except that any such persons who begin work in such factory at a later hour in the morning than other such persons employed therein may be allowed their meal times at a different time; but no such persons shall be employed during the regular meal hour in tending the machines or doing the work of any other * * * young persons in addition to their own.

SEC. 37. No * * * young person shall be employed for more than six hours at one time in a factory or workshop in which five or more such persons are employed

without an interval of at least half an hour for a meal; but such person may be so employed for not more than six and one-half hours at one time if such employment ends not later than one o'clock in the afternoon and if he or she is then dismissed from the factory or workshop for the remainder of the day; or for not more than seven and one-half hours at one time if he or she is allowed sufficient opportunity for eating a lunch during the continuance of such employment and if such employment ends not later than two o'clock in the afternoon, and he or she is then dismissed from the factory or workshop for the remainder of the day.

SEC. 38. The provisions of the two preceding sections shall not apply to iron works, glass works, paper mills, letter press establishments, print works, bleaching works or dyeing works; and the chief of the district police, if it is proved to his satisfaction that in any other class of factories or workshops it is necessary, by reason of the continuous nature of the processes or of special circumstances affecting such class, to exempt it from the provisions of the two preceding sections and that such exemption can be made without injury to the health of the women or young persons affected thereby, may, with the approval of the governor, issue a certificate granting such exemption, public notice whereof shall, without expense to the Commonwealth, be given in the manner directed by said chief.

SEC. 39. If a minor under the age of eighteen years * * * shall, without the orders, consent or knowledge of the employer or of a superintendent, overseer or other agent of the employer, labor in a manufacturing or mechanical establishment, factory or workshop during a part of any time allowed for meals in such establishment, factory or workshop, according to the notice required by section twenty-four, and if a copy of such notice was posted in a conspicuous place in the room where such labor was performed with a rule of the establishment, factory or workshop forbidding such minor * * * to labor during such time, then neither the employer nor a superintendent, overseer or other agent of the employer shall be held responsible for such labor.

SEC. 40. Whoever either for himself or as a superintendent, overseer or agent violates the provisions of the four preceding sections shall be punished by a fine of not less than fifty nor more than one hundred dollars.

SEC. 42. Whoever, either for himself or as superintendent, overseer or agent permits a child under fourteen years of age to clean any part of the machinery in a factory, if it is in motion by the aid of steam, water or other mechanical power, or if it is in dangerous proximity to such moving part, shall be punished by a fine of not less than fifty nor more than one hundred dollars for each offense.

SEC. 43. Whoever employs or permits a child under fifteen years of age to have the care, custody, management or operation of an elevator, or employs or permits a child under eighteen years of age to have the care, custody, management or operation of an elevator running at a speed of over two hundred feet a minute shall be punished by a fine of not less than twenty-five nor more than one hundred dollars for each offense.

SEC. 44. The State board of health shall, upon the application of any citizen of the Commonwealth, determine, after such investigation as it considers necessary, whether or not the manufacture of a particular acid is dangerous or injurious to the health of minors under eighteen years of age; and its decision shall be conclusive evidence thereof. Whoever employs a child under eighteen years of age in the manufacture of an acid after the State board of health has determined that such manufacture is dangerous or injurious to his health shall be punished by a fine of one hundred dollars for each offense.

SEC. 45. No person shall employ, exhibit or sell, apprentice or give away, a child under fifteen years of age for the purpose of employing or exhibiting him in dancing on the stage, playing on musical instruments, singing, walking on a wire or rope, or riding or performing as a gymnast, contortionist or acrobat in a circus, theatrical exhibition or in any public place, or cause, procure or encourage such child to engage therein; but the provisions of this section shall not prevent the education of children in vocal and instrumental music or dancing or their employment as musicians in a church, chapel, school or school exhibition, or prevent their taking part in any festival, concert or musical exhibition upon the special written permission of the mayor and aldermen of a city or of the selectmen of a town. Whoever violates the provisions of this section shall be punished by a fine of not more than two hundred dollars or by imprisonment for not more than six months.

SEC. 46. A license shall not be granted for a theatrical exhibition or public show in which children under fifteen years of age are employed as acrobats or contortionists or in any feats of gymnastics or equestrianism, or in which such children who belong to the public schools are employed or allowed to take part as performers on the stage in any capacity, or if, in the opinion of the board authorized to grant

licenses, such children are employed in such a manner as to corrupt their morals or impair their health; but the provisions of this section shall not prevent the granting of special permission authorized by the preceding section.

SEC. 51. A factory in which five or more persons and a workshop in which five or more women or young persons are employed shall, while work is carried on therein, be so ventilated that the air shall not become so impure as to be injurious to the health of the persons employed therein and so that all gases, vapors, dust or other impurities injurious to health, which are generated in the course of the manufacturing process or handicraft carried on therein shall, so far as practicable, be rendered harmless.

SEC. 52. If, in a workshop or factory which is within the provisions of the preceding section, any process is carried on by which dust is caused which may be inhaled to an injurious extent by the persons employed therein, and it appears to an inspector of factories and public buildings that such inhalation would be substantially diminished without unreasonable expense by the use of a fan or by other mechanical means, such fan or other mechanical means, if he so directs, shall be provided, maintained and used.

SEC. 53. A criminal prosecution shall not be instituted for any violation of the provisions of the two preceding sections unless such employer neglects, for four weeks after the receipt of a notice in writing, to make such changes in his factory or workshop as shall be ordered by an inspector of factories and public buildings.

SEC. 69. Deductions shall not be made from the wages of * * * minors who are paid by the day or hour, and are employed in manufacturing or mechanical establishments, for time during which the machinery is stopped, if said * * * minors are refused the privilege of leaving the mill while the damage to said machinery is being repaired; and if such employees are detained in their workrooms during the time of the breaking down of machinery, they shall not be compelled to make up time lost by such breakdown unless they are compensated therefor at their regular rates of wages. Whoever violates the provisions of this section shall be punished by a fine of not more than twenty dollars for each offense.

SEC. 70. Whoever violates a provision of this chapter for which no specific penalty is provided shall be punished by a fine of not more than one hundred dollars.

CHAPTER 350.—*Employment on elevators.*

SECTION 1. All elevators for the carriage of freight or passengers, running at a speed of more than one hundred feet a minute, shall be operated by competent persons not less than eighteen years of age, and no other person shall operate or have the care or charge of such an elevator.

SEC. 2. No elevator for the carriage of freight or passengers shall be operated by or placed in charge of any person under sixteen years of age.

SEC. 3. Any person, firm or corporation violating any provision of this act by operating or causing an elevator to be operated or to be taken care or charge of in any manner contrary to the provisions of this act shall be punished by a fine of not less than twenty-five nor more than one hundred dollars for each offense.

MICHIGAN.

COMPILED LAWS OF 1897.

CHAPTER 137.—*Hours of labor—Age limit—Cleaning machinery in motion.*

SECTION 5365. No male child under fourteen years of age or female under fifteen years of age shall be employed at labor in factories, or in manufacturing establishments or mercantile industries in this State, for a longer period than fifty-four hours in any week.

SEC. 5366. No child under twelve years of age shall be employed in any factory, manufacturing or mercantile establishment within this State. It shall be the duty of every person employing children under the age of fourteen years to keep a register in which shall be recorded the name, age and residence of every person so employed by him. And it shall be unlawful for any factory, manufacturing or mercantile establishment to hire or employ any child under the age of fourteen years without first receiving the permission, in writing, by the parent or guardian, stating the name and age of said child. If said child have no parent or guardian, there shall be a written statement under oath by said child.

SEC. 5367. Every person, firm or corporation employing such children in any factory, manufacturing or mercantile establishment shall require the permit or affidavit

mentioned in section two of this act [section 5366] to be executed before such child shall be permitted to enter upon the discharge of his duties or employment. No person, firm or corporation employing less than ten persons or children shall be deemed a manufacturing or mercantile establishment within the meaning of this act.

Sec. 5369. * * * no minor under fourteen years of age shall be allowed to clean machinery while in motion. * * *

Sec. 5372. Any person who violates or omits to comply with any of the foregoing provisions of this act, or who suffers or permits any child to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not to exceed one hundred dollars, or sixty days' imprisonment, or both in the discretion of the court.

Sec. 5375. No person, company, or corporation shall employ any male child under fourteen years of age nor any female under sixteen years of age for more than nine hours in any one day.

Sec. 5376. Any person violating the provisions of this act [sections 5375 to 5378] shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined a sum not exceeding fifty and not less than ten dollars, or by imprisonment in the county jail not more than thirty nor less than ten days, or by both fine and imprisonment, at the discretion of the court. If any company or corporation shall violate any of the provisions of this act such company or corporation shall for each violation forfeit the sum of fifty dollars, to be recovered in an action of debt in any court of competent jurisdiction.

Sec. 5377. It is hereby made the duty of the prosecuting attorney of the county where complaint shall be made to investigate all complaints made in violation of this act that may be brought before him, and, if there is probable cause, to prosecute in the name of the people of the State of Michigan in courts having competent jurisdiction thereof, all offenses contemplated by this act.

Sec. 5378. This act shall not apply to persons engaged in agriculture, or in the performance of domestic duties, or clerks in stores.

CHAPTER 141.—*Certain employments forbidden.*

SECTION 5553. Any person having the care, custody, or control of any child under sixteen years of age, who shall exhibit, use, or employ, or who shall apprentice, give away, let out, or otherwise dispose of any such child to any person in or for the vocation, service or occupation of rope or wire walking, gymnast, contortionist, rider, or acrobat, dancing or begging, in any place whatsoever, or for any obscene, indecent, or immoral purpose, exhibition or practice whatsoever, or for any exhibition injurious to the health or dangerous to the life or limb of such child, or who shall cause, procure, or encourage such child to engage therein, and any person who shall take, receive, hire, employ, use, exhibit, or have in custody any such child for any of the purposes mentioned in this section, shall be deemed guilty of a misdemeanor.

Sec. 5557. Any person who shall sell, give away, or in any way furnish to any minor child any book, pamphlet, or other printed paper or other thing, containing obscene language, or obscene prints, pictures, figures or descriptions tending to the corruption of the morals of youth, or any newspapers, pamphlets or other printed paper devoted to the publication of criminal news, police reports, or criminal deeds, and any person who shall in any manner hire, use, or employ such child to sell, give away, or in any manner distribute such books, pamphlets, or printed papers, and any person having the care, custody, or control of any such child, who shall permit him or her to engage in any such employment, shall on conviction thereof be deemed guilty of a misdemeanor.

ACTS OF 1901.

Act No. 113.—*Hours of labor—Age limit—Night work—Dangerous employments forbidden.*

SECTION 1. No male under the age of eighteen years and no female under the age of twenty-one years shall be employed in any manufacturing establishment in this State for any longer period than sixty hours in one week unless for the purpose of making necessary repairs to machinery in order to avoid the stoppage of the ordinary running of the establishments, and no male under the age of eighteen years and no female under the age of twenty-one years shall be employed in any store in this State employing more than ten persons for a longer period than sixty hours in one week: *Provided*, That no more than ten hours shall be exacted from such male minors or females under twenty-one years on any day unless for the purpose of making a shorter work day on the last day of the week.

SEC. 2. No child under the age of fourteen years shall be employed in any manufacturing establishment, hotel or store within this State. It shall be the duty of every person employing children to keep a register, in which shall be recorded the name, birthplace, age and place of residence of every person employed by him under the age of sixteen years; and no child shall be employed between the hours of six o'clock p. m. and seven o'clock a. m. in any manufacturing establishment or workshop in this State; and it shall be unlawful for any manufacturing establishment, hotel or store to hire or employ any child under the age of sixteen years without there is first provided and placed on file a sworn statement made by the parent or guardian, stating the age, date and place of birth of said child, and that the child can read and write. If said child have no parent or guardian, then such statement shall be made by the child, which statement shall be kept on file by the employer, and which said register and statement shall be produced for inspection on demand by any factory inspector appointed under this act: *Provided*, That in the city of Detroit and the city of Grand Rapids all sworn statements must be made before a deputy factory inspector.

SEC. 3. No child under the age of sixteen years shall be employed by any person, firm or corporation conducting any manufacturing establishment in this State, at employment whereby its life or limb is endangered, or its health is likely to be injured, or its morals may be depraved, by such employment. No female under the age of twenty-one years and no male under the age of eighteen years shall be allowed to clean machinery while in motion.

SEC. 4. Factory inspectors shall have power to demand a certificate of physical fitness from the county physician, who shall make such examination free of charge, in case of persons who seem physically unable to perform the labor at which they may be employed, and shall have power to prohibit the employment of any person that can not obtain such a certificate: *Provided*, This section shall not apply except to children under sixteen years of age.

ACTS OF 1903.

ACT No. 106.—*Tender of employment away from home.*

SECTION 1. * * * it shall be unlawful for any person to make a tender of inducement to go away from the home locality to work, to any child under sixteen years of age unless the written consent of the parents of such child has been first obtained, as well as the consent of the truant officer or county agent of the board of corrections and charities for the locality where said child belongs; and in case such consent is obtained and the child goes abroad under the influence of the inducements so offered, such child under sixteen years of age shall be safely returned to its home at any time when its parents shall request, in writing, such return. * * *

SEC. 3. Every person found guilty of violating the provisions of this act shall be punished by a fine not exceeding twenty-five dollars or by imprisonment of not less than ten nor more than sixty days.

MINNESOTA.

GENERAL STATUTES OF 1894.

CHAPTER 24.—*Hours of labor—Earnings of minors.*

SECTION 2240 (as amended by chapter 49, acts of 1895). In all trades, professions, callings and departments of labor and in all manufactories, workshops, mills and other places wherein persons are employed to perform labor for hire or reward, in this State, the time of labor for the persons so employed and performing labor, shall not exceed ten hours for each day, and any owner, stockholder or overseer, employer, clerk or foreman who shall compel any person or shall permit any child under the age of fourteen years, so employed, to labor for any more than ten hours in any one day, where such owner, stockholder or overseer, clerk or foreman has control, such person so offending shall be liable to a prosecution in the name of the State of Minnesota, before any justice of the peace, or [or] court of competent jurisdiction of the county wherein the same occurs, and upon conviction thereof shall be fined in any sum not less than ten nor more than one hundred dollars; *Provided*, That the provisions of this section shall not apply to agricultural laborers and domestics employed by the month and to persons engaged in the care of live stock; *And provided further*, That extra labor may be performed for extra compensation, except in the case of children under fourteen years.

SEC. 2247. It shall be necessary for the parent or guardian of such minor person as may be in service to notify the party employing such minor that such parent or guardian claims the wages of such minor and in default of such notification payment to such minor of wages so earned shall be valid.

CHAPTER 66.—*Earnings of minors.*

SECTION 5461. The earnings of any minor child of any debtor within this State, or the proceeds thereof, shall not be liable to attachment, garnishment, or sale on any final process of a court, in any action against such debtor, by reason of any debt or liability of such debtor not contracted for the especial benefit of such minor child.

CHAPTER 92a.—*Certain employments forbidden—Hours of labor.*

SECTION 6539. A person who employs, or causes to be employed, or who exhibits, uses, or has in his custody for the purpose of exhibiting or employing, any child apparently or actually under the age of sixteen years, or who, having the care, custody, or control of such child as parent, relative, guardian, employer, or otherwise, sells, lets out, gives away, or in any way procures or consents to the employment or exhibition of such a child, either,

1. As a rope or wire walker, dancer, gymnast, contortionist, rider, or acrobat; or,
2. In begging or receiving alms, or in any mendicant occupation; or,
3. In any indecent or immoral exhibition or practice; or,
4. In any practice or exhibition dangerous or injurious to the life, limb, health, or morals of the child;

* * * * *

Is guilty of a misdemeanor.

SEC. 6541. A person who compels a child under sixteen years of age to labor more than ten hours in any day in any factory, workshop or mercantile or manufacturing business, is guilty of a misdemeanor.

ACTS OF 1895.

CHAPTER 171.—*Age limit—Night work—Employment during school term—Illiterates—Employment on elevators.*

SECTION 1 (as amended by chapter 360, acts of 1897). No child under fourteen (14) years of age shall be employed at any time in any factory or workshop, or about any mine. No such child shall be employed in any mercantile establishment nor in the service of any telegraph, telephone or public messenger company except during the vacation of the public schools in the town where such child is employed. No child under sixteen (16) years of age shall be employed at any occupation dangerous or injurious to life, limb, health or morals; nor at any labor of any kind outside of the family of such child's residence before six o'clock in the morning, nor after seven o'clock in the evening, nor more than ten (10) hours in any one day, nor more than sixty hours in any one week, except in accordance with the following express permission or condition, to wit: Children not less than fourteen years of age may be employed in mercantile establishments on Saturdays and for ten days each year before Christmas until ten (10) o'clock in the evening: *Provided, however,* That this permission shall not be so construed as to permit such children to toil more than ten hours in any one day, nor over sixty hours in any one week.

SEC. 2. No child under the age below which all children are by law required to attend school shall in the year next succeeding any birthday of said child be employed at any occupation during the hours in which the public schools in the town or city in which he resides are in session, unless or until in said year he has attended some school for at least a period of time equal to that required by law for attendance of school.

SEC. 3. The commissioner of labor, the factory inspector or any assistant factory inspector shall have power to demand a certificate of physical fitness from some regularly licensed physician in the case of children who may seem physically unable to perform the labor at which they may be employed, and no minor shall be employed who can not obtain such a certificate.

SEC. 4. No child under sixteen years of age who can not read and write simple sentences in the English language shall, except in vacations of the public schools be employed at any indoor occupation, *Provided,* Such child is not a regular attendant at a day or evening school.

SEC. 5 (as amended by chapter 360, acts of 1897). Whenever it appears upon due

examination that the labor of any minor who would be debarred from employment under the provisions of sections two and four of this act is necessary for the support of the family to which said minor belongs, or for his own support, the school board or board of school trustees of the city, village or town in which said child resides may, in the exercise of their discretion, issue a permit or excuse authorizing the employment of such minor within such time or times as they may fix.

SEC. 6. No person, firm or corporation shall employ or permit any child under sixteen (16) years of age to have the care, custody, management or operation of any elevator, or permit any person under eighteen (18) years of age to have the care, custody, management or operation of any elevator running at a speed of over two hundred (200) feet a minute.

SEC. 7. No child actually or apparently under sixteen (16) years of age shall be employed in any factory, workshop or mercantile establishment, or in the service of any public telegraph, telephone or district messenger company or other corporation, unless the person, firm or corporation employing said child procures and keeps on file the certificate required in the case of such child by the following section, and also keep on file a full and complete list of such children employed therein.

SEC. 8. The employment certificates of children under sixteen (16) years of age called for by this act shall, in cities and towns having a superintendent of schools, be signed by said superintendent or some person authorized by him in writing so to sign the same; in other cities and towns it shall be signed by some member of the school board authorized by vote of said board to sign such certificates. Said certificate shall contain a statement of the name, birthplace, date of birth, age of child at date of statement. This statement shall be signed and acknowledged under oath or affirmation before the person authorized to issue the certificate. The certificate shall also contain a statement or certificate by the officer issuing the same that the child can read at sight and write legibly simple sentences in the English language, or that said child if unable so to read and write is regularly attending a day or evening school or has been excused by the school board from said attendance as provided by section five (5), and that if under the age required by law for the attendance of all children at school, said child has in the year next preceding the issuing of said certificate attended school as required by law. If attendance has been at a private school there must also be added the signature of the teacher in charge of the same followed by words certifying to school attendance. The person signing the certificate shall have authority to administer the oath provided therein but no fee shall be charged therefor. The commissioner of labor is hereby authorized and directed to prepare blank certificates such as are called for by this section and furnish the same to the superintendents of schools and school boards of the State.

SEC. 9. The statement in the certificate giving the birthplace and age of the child shall be signed by the father, if living, and resident of the same city or town; if not, by his mother; or if his mother is not living, or if living is not a resident of the same city or town, by his guardian; if a child has no father or mother or guardian living in the same city or town his own signature to the certificate may be accepted by the person authorized to approve the same.

SEC. 10. Every factory, workshop, mine, mercantile establishment or other place in which or in connection with which children are engaged at labor of any kind, shall at all times be subject to visitation by the members or agents of the board of education or board of trustees of the city, town or district in which said factory, workshop, mine, establishment or place is situated.

SEC. 11. The words factory and workshop in this act shall have the same meaning as set forth in chapter seven (7) of the general laws of eighteen hundred and ninety-three (1893).

SEC. 12. Every parent or guardian of a child under sixteen (16) years of age who permits the employment of any child contrary to the provisions of this act, or who in making the statement called for by section eight (8) of this act certifies to any materially false statement therein, and every owner, superintendent, agent or overseer of any factory, workshop or mercantile establishment, telegraph, or telephone company, district messenger company or other corporation who employs or permits to be employed therein or thereby any child contrary to the provisions of this act, and any person who employs a child contrary to the provisions of this act or violates the provisions of section ten (10) of this act shall be guilty of a misdemeanor and upon conviction thereof before any competent court shall be fined not less than twenty (20) nor more than (50) dollars for each and every offense. A failure to produce to an officer or employee of the bureau of labor, or to a member or authorized agent of the board of education or board of trustees of the city or school district in which the said child is employed, on demand, the certificate and register required by this act, shall be prima facie evidence of the illegal employment of the child whose certificate is not produced.

MISSISSIPPI.

REVISED CODE OF 1892.

CHAPTER 29.—*Enticing for purpose of employment.*

SECTION 1003. Any person who shall persuade, entice, or decoy away from its father or mother, with whom it resides, any child under the age of twenty-one years if a male, or eighteen if a female, being unmarried, for the purpose of employing such child without the consent of its parents, or one of them, shall, upon conviction, be punished by a fine of not more than twenty dollars, or imprisonment in the county jail not more than thirty days, or both.

MISSOURI.

REVISED STATUTES OF 1899.

CHAPTER 15.—ARTICLE 8.—*Certain employments forbidden—Age limit.*

SECTION 2186. It shall be unlawful for any person having the care, custody or control of any child under the age of fourteen years to exhibit, use or employ, or in any manner, or under any pretense, sell, apprentice, give away, let out or otherwise dispose of any such child to any person in or for the vocation or occupation, service or purpose of singing, playing on musical instruments, rope or wire walking, dancing, begging or peddling, or as a gymnast, contortionist, rider or acrobat in any place whatsoever, or for any obscene, indecent or immoral purpose, exhibition or practice whatsoever, or for or in any business, exhibition or vocation injurious to the health or dangerous to the life or limb of such child, or cause, procure or encourage any such child to engage therein. Nothing in this section contained shall apply to or affect the employment or use of any such child as a singer or musician in any church, school or academy, or at any respectable entertainment, or the teaching or learning the science or practice of music.

SEC. 2187. It shall also be unlawful for any person to take, receive, hire, employ, use, exhibit or have in custody any child under the age and for the purposes prohibited in section 2186 of this article.

SEC. 2188. Any person convicted under the provisions of the two preceding sections shall for the first offense be fined not exceeding one hundred dollars, or imprisoned in the county jail not exceeding three months, or both, in the discretion of the court, and, upon conviction for a second or any subsequent offense, shall be fined in any sum not exceeding five hundred dollars, or imprisoned in the penitentiary for a term not exceeding two years, or both, in the discretion of the court.

SEC. 2189. No child under the age of fourteen years shall be employed in any manufacturing or mechanical establishment in this State wherein steam, water or any other mechanical power is used in the manufacturing process carried on therein, or, where the work to be done by such child would, in the opinion of two reputable physicians in the locality where such work is to be done, be dangerous to the health of such child.

SEC. 2190. Any person, firm or corporation, or its agent, who employs, and any parent or person in charge of such child who permits the employment of such child in violation of this article, shall be deemed guilty of a misdemeanor, and shall, upon conviction, be fined not less than ten nor more than one hundred dollars, or imprisoned [imprisoned] in the county jail for a period of not less than two days nor more than ten days, or both fined and imprisoned, for each offense: *Provided*, That extreme poverty of the parent, or person in charge of such child, shall be a good defense to such proceeding.

CHAPTER 91.—ARTICLE 17.—*Cleaning machinery.*

SECTION 6434. No minor * * * shall be required to clean any part of the mill, gearing or machinery in any such establishment in this State, while the same is in motion, or work between the fixed or traversing parts of any machine, while it is in motion by the action of steam, water or other mechanical power.

CHAPTER 133.—ARTICLE 2.—*Employment in mines.*

SECTION 8811 (as amended by act approved March 22, 1901, page 211, acts of 1901).

* * * * *

No male person under the age of twelve years * * * shall be permitted to enter any mine to work therein, nor shall any boy under the age of fourteen years,

unless he can read and write, be allowed to work in any mine. Any party or person neglecting or refusing to perform the duties required to be performed by the provisions of this article shall be deemed guilty of a misdemeanor, and punished by a fine in the discretion of the court trying the same. * * *

SEC. 8812. No owner, agent or operator of any mine operated by shaft or slope shall place in charge of any engine whereby men are lowered into or hoisted out of the mines any but an experienced, competent and sober person not under eighteen years of age. * * *

CHAPTER 161.—ARTICLE 4.—*Night work in bakeries.*

SECTION 10088. * * * No person under the age of sixteen years shall be employed in any bake shop between the hours of nine o'clock at night and five o'clock in the morning.

MONTANA.

CODES AND STATUTES—SANDERS' EDITION—1895.

POLITICAL CODE.

PART III.—*Employment during school term—Illiterates.*

SECTION 1920 (as amended by chapter 45, acts of 1903). * * * Every parent, guardian or other person having charge of any child between the ages of eight and fourteen years shall send such child to a public, private, or parochial school, for the full time that the school attended is in session, which shall in no case be for less than sixteen weeks during any current year, and said attendance shall begin within the first week of the school term, unless the child is excused from such attendance * * *, upon satisfactory showing, either that the bodily or mental condition of the child does not permit of its attendance at school, or that the child is being instructed at home by a person qualified, * * * or that there is no school taught the required length of time within 2½ miles of the residence of such child by the nearest traveled road: *Provided*, That no child shall be refused admission to any public school on account of race or color. * * *

SEC. 1921 (as amended by chapter 45, acts of 1903). No child under fourteen years of age shall be employed or be in the employment of any person, company or corporation during the school term and while the public schools are in session, unless such child shall present to such person, company or corporation an age and schooling certificate herein provided for. An age and schooling certificate shall be approved only by the superintendent of schools, or by a person authorized by him, in city or other districts having such superintendent, or by the clerk of the board of trustees in village and township districts not having such superintendent, upon a satisfactory proof of the age of such minor and that he has successfully completed the studies enumerated in section 1920 of this article; or if between the ages of fourteen and sixteen years, a knowledge of his or her ability to read and write legibly the English language. The age and schooling certificate shall be formulated by the superintendent of public instruction and the same furnished, in blank, by the clerk of the board of trustees or the clerk of the district. Every person [,] company, or corporation employing any child under sixteen years of age, shall exact the age and schooling certificate prescribed in this section, as a condition of employment and shall keep the same on file, and shall upon the request of the truant officer hereinafter provided for, permit him to examine such age and schooling certificate. Any person, company, or corporation, employing any minor contrary to the provisions of this section shall be fined not less than twenty five nor more than fifty dollars for each and every offense.

SEC. 1922 (as amended by chapter 45, acts of 1903). All minors over the age of fourteen and under the age of sixteen years, who can not read and write the English language shall be required to attend school as provided in section 1920, of this article and all the provisions of said section shall apply to said minors; *Provided*, That such attendance shall not be required of such minors after they have secured a certificate from the superintendent of schools in districts having superintendents, or the clerk of the board of trustees in districts not having superintendents, that they can read, and write the English language. No person, company or corporation shall employ any such minor during the time schools are in session, or having such minor in their employ shall immediately cease such employment, upon notice from the truant officer who is hereinafter provided. Every person, company, or corporation violating the provisions of this section shall be fined not less than twenty-five nor more than fifty dollars for each and every offense.

SEC. 1924 (as amended by chapter 45, acts of 1903). * * * The truant officer shall be vested with police powers, the authority to serve warrants, and have authority to enter workshops, factories, stores and all other places where children may be employed, and do whatever may be necessary, in the way of investigation or otherwise to enforce the provisions of this act; * * *

CIVIL CODE.

Earnings of minors.

SECTION 299. The wages of a minor employed in service may be paid to him until the parent or guardian entitled thereto gives the employer notice that he claims such wages.

PENAL CODE.

Certain employments forbidden.

SECTION 472. Any person, whether as parent, relative, guardian, employer or otherwise, having in his care, custody or control any child under the age of sixteen years, who shall sell, apprentice, give away, let out or otherwise dispose of any such child to any person, under any name, title or pretense, for the vocation, use, occupation, calling, service, or purpose of singing, playing on musical instruments, rope walking, dancing, begging or peddling in any public street or highway, or in any mendicant or wandering business whatever; and any person who shall take, receive, hire, employ, use or have in custody any child for such purposes, or either of them, is guilty of a misdemeanor.

SEC. 474. Every person who receives or employs any child under fourteen years of age in any underground works or mine, or in any similar business, is punishable by a fine not exceeding one thousand dollars.

NEBRASKA.

COMPILED STATUTES OF 1881—TENTH EDITION, 1901.

PART III. --CRIMINAL CODE.

CHAPTER 23.—*Employment during school term.*

SECTION 6953. Any male or female child under the age of ten years shall not be employed in any manufacturing, mechanical, industrial or mercantile establishment.

SEC. 6954. Any male or female child under the age of fourteen years shall not be employed in any manufacturing, mechanical, industrial or mercantile establishment, except during the vacations of the public schools; unless during the year next preceding such employment, said child has for at least twenty weeks attended some public or private day school where the English [language] is taught; nor shall such employment continue, unless such child shall in each and every year attend school as herein provided, and no child shall be so employed who does not present a certificate signed by the president and secretary of the school board of the school district in which said child resides, of their compliance with the requirements of this section. Nor shall any owner, superintendent or overseer of any such establishment, parent or guardian consent to or permit the employment of any child contrary to the provisions of this act.

SEC. 6955. Any owner, superintendent or overseer of any such establishment shall require and keep on file, open to the inspection of the public, a certificate of the age, place of birth and residence of every male and female child under sixteen years of age employed therein, so long as such child is so employed; which certificate shall also state, in case the child is under fourteen years of age, the amount of said child's school attendance during the year next preceding his employment, and such certificate shall be signed by the president and secretary of the school board of the school district in which such child resides, and the forms of certificate herein referred to shall be approved by the attorney general of this State.

SEC. 6955a. Any person who shall be convicted of a violation of any of the provisions of this act shall pay for every such offense a fine of not less than twenty dollars nor more than fifty dollars: *Provided, however,* That no conviction shall be had under this act, unless the proceedings therefor shall be commenced within one year after the offense shall have been committed.

SEC. 6955b. It is hereby made the duty of the deputy labor commissioner of this State upon complaint being filed with him to inspect any and all establishments to which this act applies, and ascertain whether any of the provisions of this act have been violated. Whenever it shall come to his knowledge that any of the provisions of this act have been or [are] being violated, it shall be his duty to cause the same to be enforced: *Provided, however,* That nothing in this section contained shall be construed to prevent any other person from causing the enforcement of the provisions of this act.

NEW HAMPSHIRE.

PUBLIC STATUTES OF 1891.

CHAPTER 92.—*Employment during school term.*

SECTION 17 (as amended by chapter 70, acts of 1899). Truant officers shall, under the direction of the school board, enforce the laws and regulations relating to truants and children between the ages of eight and sixteen years not attending school and without any regular and lawful occupation, and the laws relating to the attendance at school of children between the ages of eight and sixteen years.

SEC. 18 (as amended by chapter 70, acts of 1899). Truant officers shall, if required by the school board, enforce the laws prohibiting the employment of children in manufacturing, mechanical, or mercantile establishments who have not attended school the prescribed time; and for this purpose, they may, when so authorized and required by vote of the school board, visit the manufacturing, mechanical, and mercantile establishments in their respective cities and towns, and ascertain whether any children under the age of sixteen are employed therein contrary to the provisions of law, and they shall report any cases of such illegal employment to the school board; and the truant officers, when authorized as aforesaid, may demand the names of all children under sixteen years of age employed in such manufacturing, mechanical, and mercantile establishments, and may require that the certificates and lists of such children provided for by law shall be produced for their inspection. Truant officers shall inquire into the employment, otherwise than such manufacturing, mechanical, and mercantile establishments, of children under the age of sixteen years, during the hours when the public schools are in session, and may require that the certificates of all children under sixteen shall be produced for their inspection; and any such officer may bring a prosecution against a person or corporation employing any such child, otherwise than as aforesaid, during the hours when the public schools are in session, contrary to the provisions of law. A refusal or failure on the part of an employer of children under sixteen years of age to produce the certificate required by law, when requested by a truant officer, shall be *prima facie* evidence of the illegal employment of the child whose certificate is not produced. Truant officers shall have authority without a warrant to take and place in school any children found employed contrary to the laws relating to the employment of children, or violating the laws relating to the compulsory attendance at school of children between the ages of six and sixteen years.

CHAPTER 93.—*Age limit—Illiterates.*

SECTION 10 (as amended by chapter 61, acts of 1901). No child under the age of twelve years shall be employed in any manufacturing establishment. No child under the age of fourteen years shall be employed in any manufacturing establishment, nor in any mechanical, mercantile, or other employment during the time in which the public schools are in session in the district in which he resides.

SEC. 11 (as amended by chapter 61, acts of 1901). No child under the age of sixteen years shall be employed in any manufacturing establishment, or in any mechanical, mercantile, or other employment, during the time in which the public schools are in session in the district in which he resides, without first presenting a statement of his age from his parent or guardian, sworn to before the superintendent of schools or, if there is no superintendent of schools, by some person authorized by the school board of the district in which such child is employed.

And no child under the age of sixteen years shall be employed as aforesaid during the time in which the public schools are in session in the district in which he resides without first presenting a certificate from the superintendent of schools or, if there is no superintendent of schools, some person authorized by the school board, that such child can read at sight and write legibly simple sentences in the English language. And any superintendent of schools or person authorized by the school board who

certifies falsely as to matters prescribed by this section shall be fined not less than twenty nor more than fifty dollars for each offense.

SEC. 12 (as amended by chapter 61, acts of 1901). No minor shall be employed in any manufacturing establishment, or in any mechanical, mercantile, or other employment, who can not read at sight and write legibly simple sentences in the English language, while a free public evening school is maintained in the district in which he resides, unless he is a regular attendant at such evening school or at a day school: *Provided*, That upon presentation by such minor of a certificate signed by a regular practicing physician, and satisfactory to the superintendent of schools, or, where there is no superintendent of schools, the school board, showing that the physical condition of such minor would render such attendance in addition to daily labor prejudicial to his health, said superintendent of schools or school board shall issue a permit authorizing the employment of such minor for such period as said superintendent of schools or school board may determine. Said superintendent of schools or school board, or teachers acting under authority thereof, may excuse any absence from such evening school arising from justifiable cause. Any parent, guardian, or custodian who permits to be employed any minor under his control in violation of the provisions of this section shall forfeit not more than twenty dollars for the use of the evening schools of such town or city.

SEC. 13 (as amended by chapter 61, acts of 1901). If any owner, agent, superintendent, or overseer of a manufacturing, mechanical, or mercantile establishment, or any other person, shall employ any child in violation of the provisions of either of the three preceding sections, he shall be fined not exceeding fifty dollars for each offense, for the use of the district.

SEC. 18. It shall be the duty of the school board to prosecute offenders for violations of the provisions of this chapter. If they neglect to perform this duty they shall forfeit twenty dollars for each neglect, for the use of the district, to be recovered in the name of the district by the selectmen of the town. All necessary expenses incurred in such proceedings shall be paid by the district.

SEC. 19. No prosecution under this chapter shall be sustained unless begun within one year after the offense is committed.

CHAPTER 180.—*Hours of labor.*

SECTION 14. * * * no minor under eighteen years of age shall be employed in a manufacturing or mechanical establishment for more than ten hours in one day, except in the following cases:

- I. To make a shorter day's work for one day in the week.
- II. To make up time lost on some day in the same week in consequence of the stopping of machinery upon which such person was dependent for employment.
- III. When it is necessary to make repairs to prevent interruption of the ordinary running of the machinery.

In no case shall the hours of labor exceed sixty in one week.

SEC. 15. The proprietors of every such establishment shall keep posted in a conspicuous place in every room where such persons are employed a notice printed in plain, large letters, stating the exact time of beginning and of stopping work in the forenoon and in the afternoon, and the number of hours' work required of them each day of the week.

SEC. 16. If any owner, agent, superintendent, or overseer of any such establishment shall willfully violate the provisions of either of the two preceding sections, he shall be fined not exceeding fifty dollars for each offense.

SEC. 17. A certificate of the age of a minor, made by him and by his parents or guardian and presented to the employer at the time the minor is employed, shall be conclusive evidence of his age upon a prosecution for the violation of the provisions of section fourteen.

SEC. 18. If any person shall make and utter a false certificate in regard to the age of a minor, with intent to evade the provisions of this chapter, he shall be fined twenty-five dollars, or be imprisoned thirty days, or both, for each offense.

SEC. 19. * * * Prosecutions under sections sixteen and eighteen shall be barred unless begun within one year after the offense was committed.

CHAPTER 265.—*Certain employments forbidden.*

SECTION 3. If any person shall employ or exhibit a child under the age of fourteen years in dancing, playing on musical instruments, singing, walking on a wire or rope, or riding or performing as a gymnast, contortionist, or acrobat in any circus or theatrical exhibition, or in any public place whatsoever, or shall cause, procure,

or encourage any such child to engage therein, or if any person having the custody or control of any such child shall permit him to be so employed, such person shall be fined not exceeding one hundred dollars; but nothing in this section shall be construed to prevent the education of children in vocal and instrumental music, or their employment as musicians in any church, chapel, or school, or school exhibition, or to prevent their taking part in any concert or musical exhibition.

NEW JERSEY.

GENERAL STATUTES—1895.

Age limit.

(Page 1900.)

SECTION 11 (as amended by chapter 201, acts of 1903). No child under the age of fourteen years shall be employed in any factory, workshop, mine or establishment where the manufacture of any goods whatever is carried on.

SEC. 14. Every manufacturer, merchant or other employer, employing any person contrary to the provisions of this act, or who shall be guilty of any violation hereof, shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action of debt in any district court in any city, or before any justice of the peace having due jurisdiction, and that any parent or guardian, who knowingly permits the employment of such child or children, shall be liable in a like action to a penalty of not more than fifty dollars, as the court shall fix; * * * an affidavit of the age of any minor, made by its parent or guardian at the time of its employment, shall be conclusive evidence of the age of such minor upon any trial against a manufacturer or employer for the violation of this act, but any parent or guardian that shall knowingly swear falsely in such affidavit shall be guilty of perjury, and the inspector or deputy inspector shall be authorized, in case they shall find any minor employed under any false affidavit given as aforesaid, to order and compel such minor to desist from work; the provisions of this act in relation to the hours of employment shall not apply to or affect any person engaged in preserving perishable goods in fruit-canning establishments.

SEC. 19. The title of the inspector * * *, and the deputies hereinafter provided for, shall be respectively "factory and workshop inspector" and "deputy inspectors," and it shall be their duty to enforce * * * all * * * laws relating to the * * * employment, safety, protection and compulsory attendance at school of minors, and to institute all suits or actions in the name of the inspector * * *, but no action shall be begun by any deputy inspector without the written direction of the inspector * * *.

SEC. 21. The inspector and his deputies shall have power to demand a certificate of physical fitness from some regular practicing physician in the case of minors who may seem to them physically unable to work, and who shall have power to prohibit the employment of any minor that can not obtain such a certificate.

SEC. 22. Any parent or guardian, when so required by the inspector, or one of his deputies, shall furnish to such inspector or deputy a certificate from the office of registration of births, or in the absence of such certificate, an affidavit or affidavits of the age of such minor, and if any one shall knowingly swear falsely in any such affidavit, the person or persons so swearing shall be guilty of perjury, and liable to indictment and punishment accordingly.

SEC. 29. It will be illegal for any one to delay the factory inspectors in the exercise of their duties, or conceal or attempt to conceal any child or children from examination by the inspectors.

SEC. 30. Every manufacturer, merchant or other person who shall be guilty of any violation of the provisions of this act, shall be liable to a penalty of fifty dollars for each offense, * * *.

Cleaning machinery—Unhealthful employments—Hours of labor.

(Page 2345.)

SECTION 30. No minor * * * shall clean any part of the mill gearing or machinery in any factory or workshop while the same is in motion, or work between the fixed or traversing parts of any machine while it is in motion by the action of steam, water or other mechanical power.

SEC. 49. No minor below the age of sixteen shall be employed at any work dangerous to health, without a certificate of fitness from a reputable physician.

SEC. 66. * * * , fifty-five hours shall constitute a week's work in any factory, workshop, or establishment where the manufacture of any goods whatever is carried on; and the periods of employment shall be from seven o'clock in the forenoon until twelve o'clock noon, and from one o'clock in the afternoon until six o'clock in the evening of every working day except Saturday, upon which last named day the period of employment shall be from seven o'clock in the forenoon until twelve o'clock noon.

SEC. 67. No person under the age of eighteen years, male or female, * * * shall be employed in any factory, workshop, or manufacturing establishment except during the periods of employment hereinbefore mentioned: *Provided*, That the provisions in this act in relation to the hours of employment shall not apply to or affect any person engaged in preserving perishable goods in fruit canning establishments or in any factory engaged in the manufacture of glass.

SEC. 68. The inspector of factories shall investigate any reported violation of the provisions of this act and of the act to which this is a supplement, after it has been discovered by him or brought to his notice, and may proceed against the violator or violators in the manner prescribed by the act to which this is a supplement.

SEC. 69. Any manufacturer or other employer who shall violate any of the provisions of this act shall be liable to a penalty of one hundred dollars for each offense, to be recovered in the same way and for the same purpose as prescribed in the act to which this is a supplement.

School attendance.

(Page 3039.)

SECTION 146. No child under the age of fifteen years shall be employed by any person, company or corporation to labor in any business whatever, unless such child shall have attended, within twelve months immediately preceding such employment, some public day or night school, or some well-recognized private school; such attendance to be for five days or evenings every week during a period of at least twelve consecutive weeks, which may be divided into two terms of six consecutive weeks each, so far as the arrangement of school terms will permit, and unless such child or his or her parents or guardians shall have complied with the provisions of the act approved March fifth, eighteen hundred and eighty-three, limiting the employment hours of the labor of children.

ACTS OF 1896.

CHAPTER 181.—*Night work in bakeries.*

SECTION 10 (added by chapter 64, acts of 1903). No person under the age of eighteen years shall be employed, or required, permitted or suffered to work, in a biscuit, bread or cake bakery between the hours of seven o'clock in the afternoon and seven o'clock in the forenoon.

ACTS OF 1898.

CHAPTER 235.—*Certain employments forbidden.*

SECTION 56. Any person who, whether as parent, relative, guardian, employer, or otherwise, having in his or her custody or control, lawfully or unlawfully, any minor child under the age of eighteen years, who shall sell, apprentice, give away, let out, employ, hire or otherwise dispose of such minor or minors for the purpose of begging, singing and playing on a musical instruments [instrument], rope-walking, dancing, or for any mendicant or wandering business whatsoever, or in any immoral conduct or occupation in the streets, roads and other highways or public places of this State, and any person who shall take, receive, hire, employ, use or have in custody any such minor or minors, under the age of eighteen years, and use or employ him, her or them in any such purpose, or any of them, for any mendicant or immoral business whatsoever, either in public or private places within this State, shall be guilty of a misdemeanor, and punished accordingly; and if, upon such conviction, the minor or minors shall have no home or means of support and no one to take proper care of him, her or them, the court may, in its discretion, if it shall appear a humane and proper thing to do, commit such minor or minors to the State reform school for boys, or the State industrial school for girls, until such minor or minors attain the age of eighteen years, or for a less age, in the discretion of the court.

NEW YORK.

REVISED STATUTES—THIRD EDITION—1901.

Certain employments forbidden.

(Page 428.)

SECTION 18. A person who employs or causes to be employed, or who exhibits, uses, or has in custody, or trains for the purpose of the exhibition, use or employment of, any child actually or apparently under the age of sixteen years; or who having the care, custody or control of such a child as parent, relative, guardian, employer, or otherwise, sells, lets out, gives away, so trains, or in any way procures or consents to the employment, or to such training, or use, or exhibition of such child; or who neglects or refuses to restrain such child from such training, or from engaging or acting, either

1. As a rope or wire walker, gymnast, wrestler, contortionist, rider or acrobat; or upon any bicycle or similar mechanical vehicle or contrivance; or,

2. In begging or receiving or soliciting alms in any manner or under any pretense, or in any mendicant occupation; or in gathering or picking rags, or collecting cigar stumps, bones or refuse from markets; or in peddling; or,

3. In singing; or dancing; or playing upon a musical instrument; or in a theatrical exhibition; or in any wandering occupation; or

4. In any illegal, indecent or immoral exhibition or practice; or in the exhibition of any such child when insane, idiotic, or when presenting the appearance of any deformity or unnatural physical formation or development; or

5. In any practice or exhibition or place dangerous or injurious to the life, limb, health or morals of the child, is guilty of a misdemeanor. But this section does not apply to the employment of any child as a singer or musician in a church, school or academy; or in teaching or learning the science or practice of music; or as a musician in any concert or in a theatrical exhibition, with the written consent of the mayor of the city, or the president of the board of trustees of the village where such concert or exhibition takes place. Such consent shall not be given unless forty-eight hours previous notice of the application shall have been served in writing upon the society mentioned in section two hundred and ninety-three of the Penal Code [any incorporated society for the prevention of cruelty to children], if there be one within the county, and a hearing had thereon if requested, and shall be revocable at the will of the authority giving it. It shall specify the name of the child, its age, the names and residence of its parents or guardians, the nature, time, duration and number of performances permitted, together with the place and character of the exhibition. But no such consent shall be deemed to authorize any violation of the first, second, fourth or fifth subdivisions of this section.

Employment during school term.

(Page 645.)

SECTION 316 (as amended by chapter 459, acts of 1903). It shall be unlawful for any person, firm or corporation to employ any child under fourteen years of age, in any business or service whatever, during any part of the term during which the public schools of the district in which the child resides are in session; or to employ any child between fourteen and sixteen years of age who does not, at the time of such employment, present a certificate signed by the superintendent of schools or by the principal or the principal teacher of the city or district in which the child resides or by the principal or the principal teacher of the school where the child has attended or is attending, or by such other officer as the school authorities may designate, certifying that such child during the school year next preceding his application for such certificate, has attended for not less than one hundred and thirty days the public schools, or schools having an elementary course equivalent thereto, in such city or district and that such child can read and write easy English prose and is familiar with the fundamental operations of arithmetic; or to employ, in a city of the first class or a city of the second class, any child between fourteen and sixteen years of age who has not completed such course of study as the public elementary schools of such city require for graduation from such schools and who does not hold either a certificate of graduation from the public elementary school or the preacademic certificate issued by the regents of the university of the State of New York or the certificate of the completion of an elementary school issued by the department of public

instruction, unless the employer of such child, if a boy, shall keep and shall display in the place where such child is employed and shall show whenever so requested by any attendance officer, factory inspector, or representative of the police department, a certificate signed by the school authorities or such school officers in said city as said school authorities shall designate, which school authorities, or officers designated by them, are hereby required to issue such certificates to those entitled to them not less frequently than once in each month during which said evening school is in session and at the close of the session of said evening school, stating that said child has been in attendance upon said evening school for not less than six hours each week for such number of weeks as will, when taken in connection with the number of weeks such evening school will be in session during the remainder of the current or calendar year, make up a total attendance on the part of said child in said evening school of not less than six hours per week for a period of not less than sixteen weeks, and any person who shall employ any child contrary to the provisions of this section or who shall fail to keep and display certificates as to the attendance of employees in evening schools when such attendance is required by law shall, for each offense, forfeit and pay to the treasurer of the city or village, or to the supervisor of the town in which such child resides, a penalty of fifty dollars, the same, when paid, to be added to the public school moneys of the city, village or district in which such child resides.

Earnings of minors.

(Page 1049.)

SECTION 42. Where a minor is in the employment of a person other than his parent or guardian, payment to such minor of his wages is valid, unless such parent or guardian notify the employer in writing, within thirty days after the commencement of such service, that such wages are claimed by such parent or guardian, but whenever such notice is given at any time payments to the minor shall not be valid for services rendered thereafter.

Age limit—Night work—Hours of labor—Overtime work—Employment on elevators—Cleaning and operating machinery—Polishing.

(Page 2098.)

SECTION 70 (as amended by chapter 184, acts of 1903). No child under the age of fourteen years shall be employed, permitted or suffered to work in or in connection with any factory in this State. No child between the ages of fourteen and sixteen years shall be so employed, permitted or suffered to work unless an employment certificate issued as provided in this article [1]e shall have been theretofore filed in the office of the employer at the place of employment of such child.

SEC. 71 (as amended by chapter 184, acts of 1903). Such certificate shall be issued by the commissioner of health or the executive officer of the board or department of health of the city, town or village where such child resides, or is to be employed, or by such other officer thereof as may be designated, by such board, department or commissioner for that purpose, upon the application of the parent or guardian or custodian of the child desiring such employment. Such officer shall not issue such certificate until he has received, examined, approved, and filed the following papers duly executed: (1) The school record of such child properly filled out and signed as provided in this article. (2) A passport or duly attested transcript of the certificate of birth or baptism or other religious record, showing the date and place of birth of such child. A duly attested transcript of the birth certificate filed according to law with a registrar of vital statistics, or other officer charged with the duty of recording births shall be conclusive evidence of the age of such child. (3) The affidavit of the parent or guardian or custodian of the child, which shall be required, however, only in case such last mentioned transcript of the certificate of birth be not produced and filed, showing the place and date of birth of such child; which affidavit must be taken before the officer issuing the employment certificate, who is hereby authorized and required to administer such oath, and who shall not demand or receive a fee therefor. Such employment certificate shall not be issued until such child farther has personally appeared before and been examined by the officer issuing the certificate, and until such officer shall, after making such examination, sign and file in his office a statement that the child can read and legibly write simple sentences in the English language and that in his opinion the child is fourteen years of age or upwards and has reached the normal development of a child of its age, and is in sound health and is physically able to perform the work which it intends to do. In doubtful cases such physical fitness shall be determined by a medical officer of the board or department.

of health. Every such employment certificate shall be signed, in the presence of the officer issuing the same, by the child in whose name it is issued.

Sec. 72 (as amended by chapter 184, acts of 1903). Such certificate shall state the date and place of birth of the child, and describe the color of the hair and eyes, the height and weight and any distinguishing facial marks of such child, and that, the papers required by the preceding section have been duly examined, approved and filed and that the child named in such certificate has appeared before the officer signing the certificate and been examined.

Sec. 73 (as amended by chapter 184, acts of 1903). The school record required by this article shall be signed by the principal or chief executive officer of the school which such child has attended and shall be furnished, on demand, to a child entitled thereto or to the board, department or commissioner of health. It shall contain a statement certifying that the child has regularly attended the public schools or schools equivalent thereto or parochial schools for not less than one hundred and thirty days during the school year previous to his arriving at the age of fourteen years or during the year previous to applying for such school record and is able to read and write simple sentences in the English language, and has received during such period instruction in reading, spelling, writing, English grammar and geography and is familiar with the fundamental operations of arithmetic up to and including fractions. Such school record shall also give the age and residence of the child as shown on the records of the school and the name of its parent or guardian or custodian.

Sec. 75. The board or department of health or health commissioner of a city, village or town, shall transmit, between the first and tenth day of each month, to the office of the factory inspector a list of the names of the children to whom certificates have been issued.

Sec. 76 (as amended by chapter 184, acts of 1903). Each person owning or operating a factory and employing children therein shall keep, or cause to be kept in the office of such factory, a register, in which shall be recorded the name, birthplace, age and place of residence of all children so employed under the age of sixteen years. Such register and the certificate filed in such office shall be produced for inspection, upon the demand of the commissioner of labor. On termination of the employment of a child so registered, and whose certificate is so filed, such certificate shall be forthwith surrendered by the employer to the child or its parent or guardian or custodian.

Sec. 77 (as amended by chapter 184, acts of 1903). No minor under the age of sixteen years shall be employed, permitted or suffered to work in any factory in this State before six o'clock in the morning, or after nine o'clock in the evening of any day, or for more than nine hours in any one day. No minor under the age of eighteen years, and no female shall be employed, permitted or suffered to work in any factory in this State before six o'clock in the morning, or after nine o'clock in the evening of any day; or for more than ten hours in any one day except to make a shorter work day on the last day of the week; or for more than sixty hours in any one week, or more hours in any one week than will make an average of ten hours per day for the whole number of days so worked. A printed notice, in a form which shall be prescribed and furnished by the commissioner of labor, stating the number of hours per day for each day of the week required of such persons, and the time when such work shall begin and end, shall be kept posted in a conspicuous place in each room where they are employed. But such persons may begin their work after the time for beginning and stop before the time for ending such work, mentioned in such notice, but they shall not otherwise be employed, permitted or suffered to work in such factory except as stated therein. The terms of such notice shall not be changed after the beginning of labor on the first day of the week without the consent of the commissioner of labor. The presence of such persons at work in the factory at any other hours than those stated in the printed notice shall constitute prima facie evidence of a violation of this section of the law.

Sec. 78 (as amended by chapter 184, acts of 1903). When in order to make a shorter work day on the last day of the week, a minor over sixteen and under eighteen years of age, or a female sixteen years of age or upwards, is to be required or permitted to work in a factory more than ten hours in a day, the employer of such persons shall notify the commissioner of labor in writing, of such intention, stating the number of hours of labor per day, which it is proposed to require or permit, and the time when it is proposed to cease such requirement or permission; a similar notification shall be made when such requirement or permission has actually ceased. A record of the names of the employees thus required or permitted to work overtime, with the amount of such overtime, and the days upon which such work was performed, shall be kept in the office of such factory, and produced upon the demand of the commissioner of labor.

The word custodian as used in this act [sections 70 to 78, inclusive] shall include any person, organization or society having the custody of said child.

SEC. 79.

* * * * *

No child under the age of fifteen years shall be employed or permitted to have the care, custody or management of or to operate an elevator in a factory, nor shall any person under the age of eighteen years be employed or permitted to have the care, custody or management of or to operate an elevator therein, running at a speed of over two hundred feet a minute.

SEC. 81. * * * No male person under eighteen years or woman under twenty-one years of age shall be permitted or directed to clean machinery while in motion. Children under sixteen years of age shall not be permitted to operate or assist in operating dangerous machines of any kind.

SEC. 92 (as amended by chapter 561, acts of 1903). No male child under the age of eighteen years * * * shall be employed in any factory in this State in operating or using any emery, tripoli, rouge, corundum, stone, carborundum or any abrasive, or emery polishing or buffing wheel, where articles of the baser metals or of iridium are manufactured. The owner, agent or lessee of a factory who employs any such person in the performance of such work is guilty of a misdemeanor and upon conviction thereof shall be fined the sum of fifty dollars for each such violation. The commissioner of labor, his assistants and deputies, shall enforce the provisions of this section.

Age limit—Hours of labor—Night work—Lunch time—Employment in basements—Selling newspapers.

(Page 2114.)

SECTION 160. The provisions of this article shall apply to all villages and cities which at the last preceding State enumeration had a population of three thousand or more.

SEC. 161 (as amended by chapter 255, acts of 1903). No child under the age of sixteen years shall be employed, permitted or suffered to work in or in connection with any mercantile establishment, business office, or telegraph office, restaurant, hotel, apartment house, or in the distribution or transmission of merchandise or messages, more than fifty-four hours in any one week, or more than nine hours in any one day, or before seven o'clock in the morning or after ten o'clock in the evening of any day. No female employee between sixteen and twenty-one years of age shall be required, permitted or suffered to work in or in connection with any mercantile establishment more than sixty hours in any one week; or more than ten hours in any one day, unless for the purpose of making a shorter work day of some one day of the week; or before seven o'clock in the morning or after ten o'clock in the evening of any day. This section does not apply to the employment of persons sixteen years of age or upwards on Saturday, provided the total number of hours of labor in a week of any such person does not exceed sixty hours, nor to the employment of such persons between the fifteenth day of December and the following first day of January. Not less than forty-five minutes shall be allowed for the noon day meal of the employees of any such establishment.

SEC. 162 (as amended by chapter 255, acts of 1903). No child under the age of fourteen years shall be employed, permitted or suffered to work in or in connection with any mercantile or other establishment specified in the preceding section, except that a child upwards of twelve years of age may be employed therein in villages and cities of the third class, during the summer vacation of the public schools of the city or district where such establishment is situated. No child under the age of sixteen years shall be employed in any such establishment, unless an employment certificate issued as provided in this article, shall have been theretofore filed in the office of the employer at the place of employment of such child.

[Sections 163 to 165, inclusive, are identical with sections 71 to 73, pages 609, 610 supra.]

SEC. 166 (as amended by chapter 255, acts of 1903). Children of the age of twelve years or more who can read and write simple sentences in the English language, may be employed, in mercantile and other establishments specified in section one hundred and sixty-one, in villages and cities of the third class during the summer vacation of the public schools in the city or school district where such children reside upon obtaining the vacation certificate herein provided. Such certificate shall be issued in the same manner, upon the same conditions, and on like proof that such child is twelve years of age or upwards, and in sound health, as is required for the

issuance of an employment certificate under this article, except that a school record of such child shall not be required. The certificates provided for in this section shall be designated summer vacation certificates, and shall correspond in form and substance as nearly as practicable to such employment certificate, and shall in addition thereto specify the time in which the same shall remain in force and effect which in no case shall be other than the time in which the public schools where such children reside are closed for a summer vacation.

SEC. 167 (as amended by chapter 255, acts of 1903). The owner, manager or agent of a mercantile or other establishment specified in section one hundred and sixty-one, employing children, shall keep or cause to be kept, in the office of such establishment, a register, in which shall be recorded the name, birthplace, age and place of residence of all children so employed under the age of sixteen years. Such register and the certificates filed in such office shall be produced for inspection, upon the demand of an officer of the board, department or commissioner of health of the town, village or city where such establishment is situated. On termination of the employment of the child so registered and whose certificate is so filed, such certificate shall be forthwith surrendered by the employer to the child or its parent or guardian or custodian.

SEC. 171. * * * children shall not be employed or directed to work in the basement of a mercantile establishment, unless permitted by the board or department of health, or health commissioner of the town, village or city where such mercantile establishment is situated. Such permission shall be granted unless it appears that such basement is not sufficiently lighted and ventilated, and it is not in good sanitary condition.

SEC. 172 (as amended by chapter 255, acts of 1903). The board or department of health or health commissioners of a town, village or city affected by this article shall enforce the same and prosecute all violations thereof. Proceedings to prosecute such violations must be begun within thirty days after the alleged offense was committed. All officers and members of such boards, or department, all health commissioners, inspectors, and other persons appointed or designated by such boards, departments or commissioners may visit and inspect at reasonable hours and when practicable and necessary, all mercantile or other establishments herein specified within the town, village or city for which they are appointed. No person shall interfere with or prevent any such officer from making such visitations and inspections, nor shall he be obstructed or injured by force or otherwise while in the performance of his duties. All persons connected with any such mercantile or other establishment herein specified shall properly answer all questions asked by such officer or inspector in reference to any of the provisions of this article.

SEC. 173 (as amended by chapter 255, acts of 1903). A copy of this article shall be posted in three conspicuous places in each establishment affected by its provisions.

SEC. 174 (added by chapter 151, acts of 1903). No male child under ten, and no girl under sixteen years of age shall in any city of the first class sell or expose or offer for sale newspapers in any street or public place.

SEC. 175 (added by chapter 151, acts of 1903). No male child actually or apparently under fourteen years of age shall sell or expose or offer for sale said articles unless a permit and badge as hereinafter provided shall have been issued to him by the district superintendent of the board of education of the city and school district where said child resides, or by such other officer thereof as may be officially designated by such board for that purpose, on the application of the parent, guardian or other person having the custody of the child desiring such permit and badge, or in case said child has no parent, guardian or custodian then on the application of his next friend, being an adult. Such permit and badge shall not be issued until the officer issuing the same shall have received, examined, approved and placed on file in his office satisfactory proof that such male child is of the age of ten years or upwards. No permit or badge provided for herein shall be valid for any purpose except during the period in which such proof shall remain on file, nor shall such permit or badge be authority beyond the period fixed therein for its duration. After having received, examined, approved and placed on file such proof the officer shall issue to the child a permit and badge.

SEC. 176 (added by chapter 151, acts of 1903). Such permit shall state the date and place of birth of the child, the name and address of its parent, guardian, custodian or next friend as the case may be and describe the color of hair and eyes, the height and weight and any distinguishing facial mark of such child, and shall further state that the proof required by the preceding section has been duly examined, approved and filed; and that the child named in such permit has appeared before the officer issuing the permit. The badge furnished by the officer issuing the permit shall bear on its face a number corresponding to the number of the permit, and the name of the

child. Every such permit, and every such badge on its reverse side, shall be signed in the presence of the officer issuing the same by the child in whose name it is issued.

Sec. 177 (added by chapter 151, acts of 1903). The badge provided for herein shall be worn conspicuously at all times by such child while so working; and such permit and badge shall expire at the end of one year from the date of their issue. No child to whom such permit and badge are issued shall transfer the same to any other person nor be engaged in any city of the first class as a newsboy, or shall sell or expose or offer for sale newspapers in any street or public place without having upon his person such badge, and he shall exhibit the same upon demand at any time to any police, or attendance officer.

Sec. 178 (added by chapter 151, acts of 1903). The parent, guardian, custodian or next friend, as the case may be, of every child to whom such permit and badge shall be issued shall surrender the same to the authority by which said permit and badge are issued at the expiration of the period provided therefor.

Sec. 179 (added by chapter 151, acts of 1903). No child to whom a permit and badge are issued as provided for in the preceding sections shall sell or expose or offer for sale any newspapers after ten o'clock in the evening.

Sec. 179a (added by chapter 151, acts of 1903). Any child who shall work in any city of the first class in any street or public place as a newsboy or shall sell or expose or offer for sale newspapers under circumstances forbidden by the provisions of this article, must be arrested and brought before a court or magistrate having jurisdiction to commit a child to an incorporated charitable reformatory or other institution and be dealt with according to law; and if any such child is committed to an institution, it shall when practicable, be committed to an institution governed by persons of the same religious faith as the parents of such child.

2. Nothing in this act contained shall be deemed or construed to repeal, amend, modify, impair or in any manner affect any provision of the Penal Code or the Code of Criminal Procedure.

Sec. 209 (as amended by chapter 380, acts of 1903). Any person who violates or does not comply with:

1. The provisions of article six [sections 70 to 92] of the labor law, relating to factories;

4. The provisions of article eleven [sections 160 to 173] of the labor law, relating to mercantile establishments, and the employment of women and children therein;

5. And any person who knowingly makes a false statement in or in relation to any application made for an employment certificate as to any matter required by article six and eleven of the labor law to appear in any affidavit, record, transcript or certificate therein provided for, is guilty of a misdemeanor and upon conviction shall be punished for a first offense by a fine of not less than twenty nor more than one hundred dollars; for a second offense by a fine of not less than fifty nor more than two hundred dollars, or by imprisonment for not more than thirty days or by both such fine and imprisonment; for a third offense by a fine of not less than two hundred and fifty dollars, or by imprisonment for not more than sixty days, or by both such fine and imprisonment.

NORTH CAROLINA.

ACTS OF 1891.

CHAPTER 45.—*Enticing minors.*

SECTION 1. Any person who shall employ and carry beyond the limits of this State any minor, or who shall induce any minor to go beyond the limits of this State for the purposes of employment without the consent in writing, duly authenticated, of the parent, guardian or other person having authority over such minor shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than five hundred and not more than one thousand dollars for each offense.

Sec. 2. The fact of the employment and going out of the State of the minor, or of the going out of the State by the minor, at the solicitation of the person for the purpose of employment, shall be prima facie evidence of knowledge that the person employed or solicited to go beyond the limits of the State is a minor.

ACTS OF 1893.

CHAPTER 309.—*Contract of employment with intent to defraud.*

SECTION 1. Whenever any person having a contract with any corporation, company or person for the manufacture or change of any raw material by the piece or pound

Employment in elevators.

SECTION 2575-91. No person under twenty-one years of age shall be employed in running or operating any electric, steam or hydraulic passenger or freight elevators, and it shall be unlawful for any firm, company or person in the State of Ohio, owning, operating or having in charge any such passenger or freight elevator or elevators to employ a person under twenty-one years of age to run or operate any such elevator.

SEC. 2575-92. Any person, firm or corporation, or any agent, trustee, director, officer or employee of any person, firm or corporation, who shall employ any person contrary to the provisions of the foregoing section, or who shall violate any of its provisions, shall, upon conviction thereof, be fined in any sum not less than twenty-five nor more than one hundred dollars, or imprisonment not less than thirty nor more than sixty days.

PART II.—CIVIL.

Employment during school term—Illiterates.

SECTION 4022-1 (as amended by act, page 615, acts of 1902). All parents, guardians and other persons who have care of children, shall instruct them, or cause them to be instructed in reading, spelling, writing, English grammar, geography and arithmetic. Every parent, guardian or other person having charge of any child between the ages of eight and fourteen years shall send such child to a public, private or parochial school, for the full time that the school attended is in session, which shall in no case be for less than twenty-four weeks, and said attendance shall begin within the first week of the school term, unless the child is excused from such attendance by the superintendent of the public schools, in city or other districts having such superintendent, or by the clerk of the board of education in village, special and township districts not having such superintendent, or by the principal of the private or parochial school, upon satisfactory showing, either that the bodily or mental condition of the child does not permit of its attendance at school, or that the child is being instructed at home by a person qualified, * * * to teach the branches named in this section. * * *

SEC. 4022-2 (as amended by act, page 615, acts of 1902). No child under fourteen years of age shall be employed or be in the employment of any person, company or corporation, during the school term and while the public schools are in session, unless such child shall present to such person, company or corporation an age and schooling certificate herein provided for. An age and schooling certificate shall be approved only by the superintendent of schools, or by a person authorized by him, in city or other districts having such superintendent, or by the clerk of the board of education in village, special and township districts not having such superintendent upon a satisfactory proof of the age of such minor and that he has successfully completed the studies enumerated in section 4022-1 of the Revised Statutes of Ohio; or if between the ages of fourteen and sixteen years, a knowledge of his or her ability to read and write legibly the English language. * * * Every person, company or corporation employing any child under sixteen years of age, shall exact the age and schooling certificate prescribed in this section, as a condition of employment and shall keep the same on file, and shall upon request of the truant officer hereinafter provided for, permit him to examine such age and schooling certificate. Any person, company or corporation, employing any minor contrary to the provisions of this section shall be fined not less than twenty-five nor more than fifty dollars.

SEC. 4022-3 (as amended by act, page 615, acts of 1902). All minors over the age of fourteen and under the age of sixteen years, who can not read and write the English language shall be required to attend school as provided in section 4022-1 of the Revised Statutes of Ohio and all the provisions of said section shall apply to said minors: *Provided*, That such attendance shall not be required of such minors after they have secured a certificate from the superintendent of schools, in districts having superintendents or the clerk of the board of education in districts not having superintendents, that they can read and write the English language. No person, company or corporation shall employ any such minor during the time schools are in session, or having such minor in their employ shall immediately cease such employment, upon notice from the truant officer who is hereinafter provided for. Every person, company or corporation violating the provisions of this section shall be fined not less than twenty-five nor more than fifty dollars.

SEC. 4022-9 (as amended by act, page 615, acts of 1902). When any truant officer is satisfied that any child, compelled to attend school by the provisions of this act, is unable to attend school because absolutely required to work, at home or elsewhere, in order to support itself or help support or care for others legally entitled to its

services, who are unable to support or care for themselves, the truant officer shall report the case to the authorities charged with the relief of the poor, and it shall be the duty of said officers to afford such relief as will enable the child to attend school the time each year required under this act. Such child shall not be considered or declared a pauper by reason of the acceptance of the relief herein provided for. * * * In all cases where relief is necessary it shall be the duty of the board of education to furnish text books free of charge and said board may furnish any further relief it may deem necessary, the expenses incident to furnishing said books and relief to be paid from the contingent funds of the school district.

Retaining wages—Written contracts.

SECTION 4364-65. It shall be unlawful for any person, company or corporation doing business in the State of Ohio, to retain or withhold from an employee, male or female, who is a minor, the wages or compensation, or any part thereof, agreed to be paid to such employee, and due to the same for work performed or services rendered, because of presumed negligence or failure to comply with rules, or for breakage of machinery, or for alleged incompetency to produce work or to perform labor in accordance with any standard of merit set up; nor shall any firm, corporation, or individual as aforesaid, receive any guarantee, bonus, or money deposit, or any other form of security, in order to obtain or to secure for any such minor employment, or to insure faithful performance of labor, or to guarantee strict observance of rules, or to make good any losses which may be ascribed or charged to the incompetence, negligence, or inability of such minor employee.

SEC. 4364-66 (as amended by act, page 598, acts of 1902). No person, company or corporation, as aforesaid, shall give employment to any minor, without agreeing with said minor what wages or compensation he or she shall be entitled to receive per day, week, month or year or per piece for work performed; and written evidence of such agreement shall be furnished to such minor, and on or before each pay day a statement of earnings due, and the amount thereof to be paid to him or her on such pay day shall be given to such minor, and no subsequent change shall be made in the wages or compensation of such minor without notice of the same being given to him or her at least twenty-four hours previous to its going into effect, and when such change is effected written agreement shall be given as in the first instance to said minor employee.

SEC. 4364-67. Any person, or officer, or agent of any company or corporation, who shall violate any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof in any court of competent jurisdiction, be fined in any sum not exceeding two hundred dollars, or imprisonment in the county jail for a period not exceeding six months, or both, at the discretion of the court; and it is hereby declared to be the duty of the State inspector of workshops and factories to see that the provisions of this act shall be enforced.

PART IV.—PENAL.

Certain employments forbidden.

SECTION 6984. Whoever takes, receives, hires, employs, uses, exhibits, or in any manner, or under any pretense, sells, apprentices, gives away, lets out, or otherwise disposes of, to any person, any child under the age of fourteen years, for or in the vocation, occupation, service, or purpose of singing, playing on musical instruments, rope or wire walking, dancing, begging, or peddling, or as a gymnast, contortionist, rider, or acrobat, or for or in any obscene, indecent, or immoral purpose, exhibition, or practice, or for or in any business, exhibition, or vocation injurious to the health or dangerous to the life or limbs of such child, or causes, or procures, or encourages any such child to engage therein, or causes or permits any such child to suffer, or inflicts upon it, unjustifiable physical pain or mental suffering, or willfully causes or permits the life of any such child to be endangered, or its health to be injured, or such child to be placed in such situation that its life may be endangered, or its health injured, or has in custody any such child for any of the purposes aforesaid, shall be fined not more than two hundred dollars, or imprisoned not more than six months, or both.

SEC. 6986-1. No child under the age of sixteen years shall be employed by any person, firm, or corporation in this State, at employment whereby its life or limb is endangered, or its health is likely to be injured, or its morals may be depraved by such employment.

SEC. 6986-2. Any person, firm, or corporation in this State who willfully causes or permits the life or limb of any child under the age of sixteen years to be endangered,

for any mendicant business whatsoever, in the streets, roads or other highways of this Commonwealth, and whosoever shall take, receive, hire, employ, use or have in custody, any such minor, for the vocation, occupation, calling, service or purpose of singing, playing upon musical instruments or begging, upon the street, roads, or other highways of the Commonwealth, or for any mendicant business whatever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than fifty dollars nor more than one hundred dollars.

SEC. 10. Any person having the care, custody or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away or permit such child to sing, dance, act, or in any manner exhibit, in any dance house whatever, or in any concert saloon, theatre or place of entertainment, where wines or spirituous or malt liquors are sold or given away, or with which any place for the sale of wines or spirituous or malt liquors is directly or indirectly connected, by any passageway or entrance, and any proprietor of any dance house whatever, or any such concert saloon, theatre or place of entertainment, so employing any such child, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than fifty dollars nor more than one hundred dollars for each offense.

SEC. 11. Any person having the care, custody or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away or otherwise dispose of such child, and any person who shall take, receive or employ such child for the vocation or occupation of rope or wire walking, or as an acrobat, gymnast, contortionist or rider, and any person who, having the care, custody or control of any minor child whatsoever, shall sell, apprentice, give away or otherwise dispose of such child, or who shall take, receive or employ such child, for any obscene, indecent or illegal exhibition or vocation, or any vocation injurious to the health or dangerous to the life or limb of such child engaged therein, or for the purpose of prostitution, and any person who shall retain, harbor or employ any minor child in or about any assignation house or brothel, or in any place where any obscene, indecent or illegal exhibition takes place, shall be guilty of a misdemeanor, and upon conviction thereof before any justice of the peace, magistrate or court of record, shall be fined not less than fifty dollars nor more than one hundred dollars for each offense.

SEC. 12. No person, firm or corporation shall employ or permit any minor under the age of fourteen years to have the care, custody, management or operation of any elevator. Any person, firm or corporation, employing any minor under the age of fourteen years to operate, manage or otherwise have the care or custody of an elevator, shall be guilty of a misdemeanor, and upon conviction thereof, shall be sentenced to pay a fine of not less than twenty-five dollars nor more than one hundred dollars.

SEC. 13. Any person who shall take, receive, hire or employ any child under twelve years of age, in any underground work or mine, or like place whatsoever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than ten dollars nor more than fifty dollars.

SEC. 14. No boy under the age of fourteen (14) years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery.

SEC. 15. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

SEC. 16. If any person or persons contravene or fail to comply with the provisions of this act in respect to the employment of boys, young male persons or females, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of securing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

SEC. 17. No boy under the age of twelve years, or any woman or girl of any age shall be employed or permitted to be in the workings of any bituminous coal mine for purpose of employment or for any other purpose; and no boy under the age of

sixteen shall be permitted to mine or load coal in any room, entry or other working place, unless in company with a person over sixteen years of age. If the mine inspector or mine foreman has reason to doubt the fact of any particular boy being as old as this act requires for the service which said boy is performing at any mine, it shall be the duty of said mine inspector or mine foreman to report the fact to the superintendent, giving the name of said boy, and the said superintendent shall at once discharge the said boy.

Sec. 86. A sober and competent person, not under eighteen (18) years of age, shall be engaged to run the breaker engine, and he shall attend to said engine while the machinery is in motion.

Sec. 88. No person under fifteen (15) years of age shall be appointed to oil the machinery, and no person shall oil dangerous parts of such machinery while it is in motion.

Sec. 112 (as amended by act No. 268, acts of 1903). No boy under the age of sixteen years, * * * or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of fourteen years, * * * or girl of any age, be employed of [or] permitted to be in or about the outside structures or workings of a colliery for the purpose of employment; but it is provided, however, that this prohibition shall not affect the employment of a boy * * *, of suitable age, in an office or in the performance of clerical work at a colliery.

Sec. 113. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

Sec. 114. If any person or persons contravene or fail to comply with the provisions of this act in respect to the employment of boys, young male persons * * *, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of securing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

Sec. 155. An engineer placed in charge of an engine whereby persons are hoisted or lowered in any mine shall be * * * of not less than twenty-one (21) years of age.

Sec. 212. All offenses under this act are declared to be misdemeanors, and in default of payment of any penalty or cost by the party or parties sentenced to pay the same, he or they may be imprisoned for a period not exceeding three (3) months and not less than thirty (30) days.

BRIGHTLY'S DIGEST—1893-1903.

Employment in bakeries.

(Page 62.)

SECTION 1. * * * No person under the age of eighteen (18) years shall be employed in any bakehouse between the hours of nine (9) o'clock at night and five (5) in the morning. Excepted from this rule shall be the time on Sunday for setting the sponges for the night's work following.

Sec. 13. No minor male or female * * * shall be employed at labor or detained in any biscuit, bread, pie or cake bakery, pretzel or macaroni establishment, for a longer period than twelve hours in any one day, nor for a longer period than sixty hours in any one week.

Sec. 23. Any person who violates any of the provisions of this act, * * * shall be guilty of a misdemeanor, and on conviction before any justice of the peace, magistrate, alderman, mayor or burgess, shall be punished by a fine of not less than twenty nor more than fifty (\$50) dollars, for a first offense; and not less than fifty (\$50) nor more than one hundred (\$100) dollars, for a second offense, or imprisonment for not more than ten (10) days; and for a third offense, by a fine of not less than two hundred and fifty (250) dollars and more than thirty (30) days imprisonment.

Names of children employed.

(Page 148.)

SECTION 128. * * * Any person employing a child or children shall furnish, on or before the third Monday of the school term and quarterly thereafter, to the

superintendent of schools, to the secretary of the board of school directors or controllers of the district in which such child or children reside, the names, age, place of residence, and name of parent or guardian of every person under the age of sixteen years in his employ at the time of said report: * * *

Hours of labor—Age limit—Illiterates.

(Page 254.)

SECTION 1. No minor male or female * * * shall be employed at labor or detained in any manufacturing establishment, mercantile industry, laundry, workshop, renovating works or printing office, for a longer period than twelve hours in any day, nor for a longer period than sixty hours in any week.

SEC. 2. No child under thirteen years of age shall be employed in any factory, manufacturing or mercantile industry, laundry, workshop, renovating works, or printing office within this State.

SEC. 3. It shall be unlawful for any factory, manufacturing or mercantile industry, laundry, workshop, renovating works, or printing office to hire or employ any child between the age of thirteen and sixteen years, without there is first provided and placed on file an affidavit made by the parent or guardian stating the age, date and place of birth of said child. If said child have no parent or guardian, then such affidavit shall be made by the child, which affidavit shall be kept on file by the employer, and shall be returned to the child when employment ceases.

SEC. 4. All persons authorized to administer oaths must examine all children as to their ability to read and write the English language. After a careful examination, if a child is found unable to read and write the English language, or has not attended school as required by law, or is under thirteen years of age, it will be unlawful to issue a certificate; and in no case shall the officer who executes certificates charge more than twenty-five cents for administering the oath and issuing the certificate.

SEC. 5. Every person, firm or corporation, employing men, women or children, or either, in any factory, manufacturing or mercantile industry, laundry, workshop, renovating works, or printing office, shall post and keep posted, in a conspicuous place in every room where such help is employed, a printed notice, stating the number of hours per day for each day of the week required of such persons; and, in every room where children under sixteen years of age are employed, a list of their names with their age.

SEC. 8. * * * no minor under sixteen years of age shall be allowed to clean machinery while in motion. And no minor, under fourteen years of age, shall operate or otherwise have the care or custody of an elevator.

SEC. 21. Any person who violates any of the provisions of this act, or who suffers any child or female to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by fine of not more than five hundred dollars. In all such cases the hearing shall be conducted by the alderman or justice of the peace before whom information is lodged, and, after full hearing of parties in interest, the alderman or justice of the peace shall impose the fine herein provided, which shall be final unless an appeal be taken to the court of quarter sessions within twenty days from the date of the imposition of the fine, as herein provided.

SEC. 84. [This section makes the same provision as to the employment of women and children in bituminous mines as is found in sec. 112, supra, for anthracite mines.]

Employment as steam engineers.

(Page 255.)

SECTION 165. It shall be unlawful for any person or persons to have charge of or to operate a steam boiler or steam engine over ten horsepower, in cities of the first class of this Commonwealth, except locomotive boilers used in transportation, and steam engines and steam boilers carrying less than fifteen pounds pressure per square inch, unless said person or persons are upwards of twenty-one years of age * * *

PORTO RICO.

REVISED STATUTES AND CODES—1902.

REVISED STATUTES.

Hours of labor—Inhumane treatment.

SECTION 166. No child of either sex, under sixteen years shall be compelled to work in agricultural factories and manufacturing establishments over six hours per

day, three in the morning and three in the afternoon. All persons who shall violate this provision shall be fined in a sum of from five to fifteen dollars, or imprisonment not to exceed thirty days for each offense.

Sec. 167. No foreman, teacher or other person having under his charge the work, care or education of a minor under sixteen years of age, shall resort to inhumane treatment to compel such minor to work or to study. Any violation of the provisions hereof shall be punished with a fine of from five to fifteen dollars or imprisonment not to exceed thirty days for each offense.

PENAL CODE.

Certain employments forbidden.

SECTION 265. Any person, whether as parent, relative, guardian, employer or otherwise, having in his care, custody, or control any child under the age of twelve years, who shall sell, apprentice, give away, let out, or otherwise dispose of any such child to any person, under any name, title, or pretense, for the vocation, use, occupation, calling, service of begging, or peddling, in any public street or highway, or in any mendicant or wandering business whatsoever, and any person who shall take, receive, hire, employ, use, or have in custody any child for such purposes, or either of them, is guilty of a misdemeanor.

CIVIL CODE.

Earnings of minors.

SECTION 225. Property acquired by an unemancipated child by labor or industry, or for any valuable consideration, belongs to the said child, but the usufruct thereof belongs to the parents having *potestas* over him whilst he lives in their company; but if the child, with the consent of his parents, lives independently, he shall be deemed emancipated for all effects as regards the said property, and he shall be the full owner and have the usufruct and administration thereof.

RHODE ISLAND.

GENERAL LAWS OF 1896.

CHAPTER 64.—*Employment during school term.*

SECTION 4 (as amended by chapter 1009, enacted 1902). No minor child who has not completed thirteen years of life shall be employed to labor or at service, or engaged in business, except during the vacations of the public schools of the city or town wherein such child resides, or as provided for by section one of this chapter.

Sec. 5 (as amended by chapter 1009, enacted 1902). No minor child who has not completed fifteen years of life shall be employed to labor or at service unless he shall present to his employer a certificate made by or under the direction of the school committee of the city or town wherein such child resides; said certificate shall be made on a blank and in a form furnished by the secretary of the State board of education and shall state the name, place and date of birth of said child, and the name and residence of the person having control of said child.

Sec. 6 (as amended by chapter 1009, enacted 1902). Every person, whether principal or agent, who shall employ or permit to be employed or shall aid or abet the employment to labor or at service of any minor child above described in section four, who has not complied with the provisions above recited in section five, shall for every such offense or neglect of such duty be fined not exceeding twenty dollars.

CHAPTER 68.—*Age limit—Cleaning machinery.*

SECTION 1. No child under twelve years of age shall be employed in any factory, manufacturing or mercantile establishment, within this State. It shall be the duty of every person, firm or corporation employing children, to keep a register in which shall be recorded the name, birthplace, age and place of residence of every person employed under the age of sixteen years; and said register shall be produced for inspection on demand by either of the inspectors appointed under this chapter.

Sec. 2. No person, firm or corporation employing less than five persons who are women or children shall be deemed a factory, manufacturing or mercantile establishment within the meaning of this chapter.

SEC. 6. No minor under sixteen years of age shall be allowed to clean machinery while in motion, unless the same is necessary and is approved by said inspectors as not dangerous. * * *

SEC. 8. Water-closets, earth-closets or privies shall be provided in all places where * * * children are employed, in such manner as shall, in the judgment of said inspectors, meet the demands of health and propriety. * * *

SEC. 12. Any person who knowingly violates any of the provisions of this chapter, or who knowingly suffers or permits any child * * * to be employed in violation of its provisions, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not more than five hundred dollars.

SEC. 13. A printed copy of this chapter shall be posted by the inspectors in each workroom of every factory, manufacturing or mercantile establishment where persons are employed who are affected by the provisions of this chapter.

CHAPTER 108.—*Employment on elevators.*

SECTION 16 (as amended by chapters 921, enacted 1901, and 973, enacted 1902). * * * no person under the age of eighteen years shall take charge of or operate any passenger elevator.

The lessee or owner or owners of any building, or in case such lessee or owner, or any of them, be non compos mentis or a minor, the guardian of any such lessee or owner, or in case such lessee or owner, or any of them, be a nonresident, the agent of any such lessee or owner having charge of such property, who shall neglect or fail to comply with the provisions of this * * * section shall be fined not less than five dollars nor more than ten dollars for each day that an elevator shall be used or operated in said building contrary to the provisions of this * * * section. In case there shall be several such lessees or owners or agents in charge of any building in which an elevator shall be used or operated contrary to the provisions of this * * * section, proceedings may be had against any or all of them jointly, or against any of them, for the recovery of such fine.

CHAPTER 115.—*Certain employments forbidden.*

SECTION 4 (as amended by chapter 475, enacted 1897). Every person having the custody or control of any child under the age of sixteen years, who shall exhibit, use or employ, or shall in any manner or under any pretense sell, apprentice or give away, let out or otherwise dispose of any such child to any person for or in the vocation, occupation, service or purpose of rope or wire walking, or as a gymnast, wrestler, contortionist, equestrian performer, acrobat, or rider upon any bicycle or mechanical contrivance, or in any dancing, theatrical or musical exhibition unless it be in connection with churches, schools, or private instruction in dancing or music or unless it be under the auspices of a Rhode Island society incorporated, or organized without incorporation, for a purpose authorized by section 11 of chapter 176 of the General Laws, or unless it be with the written consent, previously obtained and revocable at will, of the mayor of the city or the president of the town council where such child is to be employed; or for or in gathering or picking rags, or collecting cigar stumps, bones, or refuse from markets, or in begging, or in any mendicant or wandering occupation, or in peddling in places injurious to the morals of such child; * * * or in any illegal, obscene, indecent, or immoral purpose, exhibition or practice whatsoever; or for or in any business, exhibition or vocation injurious to the health or morals, or dangerous to the life or limb of such child, or who shall cause, procure or encourage any such child to engage therein, or who after being notified by an officer mentioned in section 6 of this chapter to restrain such child from engaging therein, shall neglect or refuse to do so, shall be held guilty of a misdemeanor and shall, for every such offense, be imprisoned not exceeding one year or be fined not exceeding two hundred [and] fifty dollars, or be both fined and imprisoned as aforesaid, and shall forfeit any right which he may have to the custody of such child.

SEC. 5 (as amended by chapter 475, enacted 1897). Every person who shall take, receive, hire or employ, exhibit, or have in custody, or who shall cause to be taken, hired or employed, exhibited, or held in custody, any child under the age of sixteen years, for any of the purposes prohibited in the preceding section, shall be held guilty of a misdemeanor, and shall be punished for every such offense in the manner provided in said section.

SEC. 6 (as amended by chapter 475, enacted 1897). The town sergeant of any town, the chief of police of any city, or the general agent or agents of the Rhode Island Society for the Prevention of Cruelty to Children may enter any place where any

child may be held, detained or employed, in violation of this chapter, and without process of law, seize and detain such child and hold him as a witness to testify upon the trial of any person charged with violating the provisions of this chapter; * * *

CHAPTER 198.—*Hours of labor.*

SECTION 22 (as amended by chapter 994). No minor under sixteen years of age * * * shall be employed in laboring in any manufacturing or mechanical establishment more than fifty-eight hours in any one week; and in no case shall the hours of labor exceed ten hours in any one day, excepting when it is necessary to make repairs to prevent the interruption of the ordinary running of the machinery, or when a different apportionment of the hours of labor is made for the sole purpose of making a shorter day's work for one day of the week.

Every employer shall post in a conspicuous place in every room where such persons are employed a printed notice stating the number of hours' work required of them on each day of the week; and the employment of any such person for a longer time in any day than so stated shall be deemed a violation of this section, unless it appears that such employment is to make up for time lost on some previous day of the same week in consequence of the stopping of the machinery upon which such person was employed or dependent for employment: *Provided*, That the provisions of this section shall not be construed to enlarge or impair any restriction placed upon the employment of any minor mentioned in chapter 64.

SEC. 23. Every person who willfully employs, or has in his employment or under his charge any person, in violation of the provisions of the preceding section, and every parent or guardian who permits any such minor to be so employed, shall be fined not exceeding twenty dollars for each offense. A certificate of the age of a minor, made by him or by his parent or guardian, at the time of his employment in a manufacturing establishment, shall be conclusive evidence of his age upon any trial of any person other than the parent or guardian for a violation of the preceding section.

SOUTH CAROLINA.

CODE OF 1902.

CIVIL CODE.

CHAPTER 83.—*Earnings of minors.*

SECTION 2694. If any person shall hire or employ any minor, or person under the age of twenty-one years, without the knowledge and consent of the parents or guardian of such minor, such person shall pay to the said parents or guardian the full value of the labor of said minor from and after notice from the parents or guardian that payment of such service shall be made to him or them, as the case may be.

ACTS OF 1903.

ACT No. 74.—*Age limit—Night work.*

SECTION 1. From and after the first day of May, 1903, no child under the age of ten years shall be employed in any factory, mine or textile manufacturing establishment of this State; and from and after the first day of May, 1904, no child under the age of eleven shall be employed in any factory, mine or textile establishment of this State; from and after the first day of May, 1905, no child under the age of twelve years shall be employed in any factory, mine or textile establishment of this State, except as hereinafter provided.

SEC. 2. From and after May first, 1903, no child under the age of twelve years shall be permitted to work between the hours of 8 o'clock p. m. and 6 o'clock in the morning in any factory, mine or textile manufactory of this State: *Provided*, That children under the age of twelve, whose employment is permissible, under the provisions of this act, may be permitted to work after the hour of 8 p. m. in order to make up lost time, which has occurred from some temporary shut down of the mill, on account of accident or breakdown in the machinery, which has caused loss of time: *Provided, however*, That under no circumstances shall a child below the age of twelve work later than the hour of 9 p. m.

SEC. 3. Children of a widowed mother and the children of a totally disabled father, who are dependent upon their own labor for their support, and orphan children who are dependent upon their own labor for their support, may be permitted to work in

textile establishments of this State for the purposes of earning their support: *Provided*, That in the case of a child or children of a widowed mother or of a totally disabled father, the said mother or the said father, and in case of orphan children, the guardian of said children or person standing in loco parentis of said child or children, shall furnish to any of the persons named in section 4 of this act an affidavit duly sworn to by him or her before some magistrate or clerk of court of the county in which he or she resides, stating that he or she is unable to support the said children, and that the said children are dependent upon their own labor for their support, then, and in that case, the said child or children of the said widowed mother and the said disabled father and said orphan children shall not be affected by the prohibitions of section 1 of this act; and filing of said affidavit shall be full justification for their employment: *Provided, further*, That the officer before whom the said affidavit shall be subscribed shall indorse upon the back thereof his approval and his consent to the employment of said child or children. Any person who shall swear falsely to the facts set forth in said acts shall be guilty of perjury and shall be indictable as provided by law: *Provided, further*, That the employment of said child or children shall be subject to the hours of labor herein limited.

Sec. 4. Any owner, superintendent, manager or overseer of any factory, mine or textile manufacturing establishment, or any other person in charge thereof or connected therewith, who shall knowingly employ any child contrary to the provisions of this act, shall be guilty of a misdemeanor, and for every such offense shall, upon conviction thereof, be fined not less than ten dollars nor more than fifty dollars, or be imprisoned not longer than thirty days, at the discretion of the court.

Sec. 5. Any parent, guardian or other person having under his or her control any child, who consents, suffers or permits the employment of his or her child or ward under the ages as above provided, or who knowingly or willfully misrepresents the age of such child or ward to any of the persons named in section 4 of this act, in order to obtain employment for such child or ward, shall be deemed guilty of a misdemeanor, and for every such offense shall, upon conviction thereof, be fined not less than ten dollars nor more than fifty dollars, or be imprisoned not longer than thirty days, in the discretion of the court.

Sec. 6. Any parent, guardian or person standing in loco parentis, who shall furnish to the persons named in section 4 of this act a certificate that their child or ward has attended school for not less than four months during the current school year, and that said child or children can read and write, may be permitted to obtain employment for such child or children in any of the textile establishments of this State during the months of June, July and August, and the employment of such child or children during the said months upon the proper certificate that such child or children have attended school as aforesaid, shall not be in conflict with the provisions of this act.

Sec. 7. In the employment of any child under the age of twelve years in any factory, mine or textile manufacturing establishment, the owner or superintendent of such factory, mine or textile manufacturing establishment shall require of the parent, guardian or person standing in loco parentis of such child, an affidavit giving the age of such child, which affidavit shall be placed on file in the office of the employer; and any person knowingly furnishing a false statement of the age of such child shall be guilty of a misdemeanor, and for every such offense shall, upon conviction, be fined not less than ten dollars nor more than fifty dollars, or be imprisoned not longer than thirty days, in the discretion of the court.

SOUTH DAKOTA.

REVISED CODES OF 1903.

POLITICAL CODE.

Employment in mines.

SECTION 145. All corporations or individuals working mines in South Dakota who shall employ, or permit to be employed, in such mines any children under fourteen years of age shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding one thousand dollars.

Employment during session of school.

SECTION 2361. No child between eight and fourteen years of age shall be employed in any mine, factory or workshop or mercantile establishment, or, except by his parent or guardian, in any other manner during the hours when the public schools

in the city, town, village or district, are in session unless the person, firm or corporation employing him shall first procure a certificate from the superintendent of the schools of the city, town or village, if one be employed, otherwise from the clerk of the school board or board of education, stating that said child has attended school for the period of twelve weeks during the year, as required by law, or has been excused from attendance as provided in section 2359; and it shall be the duty of such superintendent or clerk to furnish such certificate upon application of the parent, guardian or other person having control of such child, entitled to the same. Every owner, superintendent or overseer of any mine, factory, workshop, or mercantile establishment, and any other person who shall employ any child between eight and fourteen years of age contrary to the provisions of this article, shall be deemed guilty of a misdemeanor, and for every such offense shall upon conviction thereof, be fined not less than ten dollars nor more than twenty dollars and costs.

CIVIL CODE.

Earnings of minors.

SECTION 124. The wages of a minor employed in service may be paid to him or to her until the parent or guardian entitled thereto gives the employer notice that he claims such wages.

PENAL CODE.

Hours of labor.

SECTION 764. Every owner, stockholder, overseer, employer, clerk or foreman of any manufactory, workshop or other place used for mechanical or manufacturing purposes, who, having control, shall compel * * * any child under eighteen years of age, or permit any child under fourteen years of age, to labor in any day exceeding ten hours, shall be deemed guilty of a misdemeanor, and upon conviction, shall be punished by a fine not exceeding one hundred and not less than ten dollars.

TENNESSEE.

ACTS OF 1893.

Age limit.

SECTION 1 (as amended by chapter 34, acts of 1901). It shall be unlawful for a proprietor, foreman, owner or other person to employ any child less than 14 years of age in any workshop, factory or mine in this State; unless said proprietor, foreman or owner shall know the age of the child, it shall be his or their duty to require the parent or guardian to furnish a sworn statement of its age, and any swearing falsely to such by the parent or guardian shall be perjury and punishable as such.

SEC. 2 (as amended by chapter 34, acts of 1901). Any proprietor, foreman or owner employing a child less than 14 years of age in conflict with the provisions of this act, except where such proprietor, foreman or owner has been furnished with a sworn statement of guardian or parent, that the child is more than 14 years of age, shall be guilty of a misdemeanor, and upon conviction, shall be fined not less than \$25 and not more than \$250.

SEC. 3 (as amended by chapter 34, acts of 1901). The grand jury shall have inquisitorial powers to investigate violations of this act, and judges of the circuit and criminal courts of the State shall specially charge the grand jury at the beginning of each term of the court to investigate violations of this act.

TEXAS.

ACTS OF 1903.

CHAPTER 28.—*Age limit—Illiterates—Night work—Employment in mines, distilleries, or breweries.*

SECTION 1. Any person or any agent or employee of any person, firm or corporation, who shall hereafter employ any child under the age of twelve years to labor in or about any mill, factory, manufacturing establishment, or other establishment using machinery, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not less than fifty dollars, and not more than two hundred dollars, and each day the provisions of this act are violated shall constitute a separate offense.

SEC. 2. Any person, or any agent or employee of any person, firm or corporation, who shall hereafter employ any child between the ages of twelve and fourteen years (who can not read and write simple sentences in the English language) to labor in or about any mill, factory, manufacturing establishment, or other establishment using machinery, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not less than fifty dollars, nor more than two hundred dollars; and each day the provisions of this act are violated shall constitute a separate offense: *Provided*, That such child who has a widowed mother, or parent incapacitated to support it, may be employed between the hours of 6 a. m. and 6 p. m.: *Provided*, further, That such parent is incapacitated from earning a living, and has no means of support other than the labor of such child; and in no event shall any child between the ages of twelve and fourteen years be permitted to work outside the hours between 6 a. m. and 6 p. m.

SEC. 3. Any person, or agent or employee of any person, firm or corporation, owning, operating or assisting in operating, any mine, distillery or brewery, who shall employ any child under the age of sixteen years to labor in or about any mine, distillery or brewery, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not less than fifty, nor more than two hundred dollars.

UTAH.

CONSTITUTION.

ARTICLE 16.—*Employment in mines.*

SECTION 3. The legislature shall prohibit:

(1) The employment of * * * children under the age of fourteen years, in underground mines.

REVISED STATUTES—1898.

TITLE 36.—*Employment in mines and smelters.*

SECTION 1338. It shall be unlawful for any person, firm, or corporation to employ any child under fourteen years of age, * * * to work in any mine or smelter in the State of Utah. Any person, firm, or corporation who shall violate any of the provisions of this section shall be deemed guilty of a misdemeanor.

TITLE 43.—*Earnings of minors.*

SECTION 1544. When a contract for the personal services of a minor has been made with him alone, and those services are afterward performed, payment made therefor to such minor in accordance with the terms of the contract, is a full satisfaction for those services, and the parent or guardian can not recover therefor a second time.

TITLE 73.—*Exemption of wages from execution, etc.*

SECTION 3243. The earnings of any minor child of any debtor within this State and the proceeds thereof are exempt from execution against such debtor by reason of any debts or liability of such debtor, not contracted for the special benefit of such minor child.

VERMONT.

STATUTES OF 1894.

CHAPTER 38.—*School attendance—Illiterates.*

SECTION 712. No child under fifteen years of age shall be employed in a mill or factory unless such child has attended public school twenty-six weeks during the current year, and deposited with the owner or overseer of such mill or factory a certificate of such attendance at school, signed by the teacher thereof.

SEC. 713. A child under fourteen who can not read and write shall not be employed during the sessions of the school such child should attend.

SEC. 714. Any person violating the provisions of the three preceding sections shall be fined not more than twenty-five dollars and not less than five dollars to the use of the town in which the child resides. Truant officers shall make complaint for a violation of this chapter to a justice or judge of a municipal court.

Sec. 715. The town superintendent may inquire of the owner or overseer of a mill or factory as to the employment of children therein, may call for the production of the certificate deposited with such owner or overseer, and satisfy himself that the requirements of law have been complied with.

CHAPTER 225.—*Age limit—Hours of labor.*

SECTION 5146. An owner, agent, superintendent or overseer of a manufacturing or mechanical establishment who knowingly employs or permits to be employed in such establishment a child under ten years of age, or employs a child under fifteen years of age more than ten hours in one day, and a parent or guardian who allows or consents to such employment, shall be fined fifty dollars.

ACTS OF 1902.

Act No. 90.—*Employment of women and minors in barrooms.*

SECTION 24. * * * No female [shall] be employed on the premises or in the room in which the license is operated.

No male person under the age of twenty-one [shall] be employed therein.

The two prohibitions last named shall not apply to hotels, common victuallers or pharmacists holding a license of the fifth class [druggist's license].

VIRGINIA.

ACTS OF 1889-90.

CHAPTER 193.—*Hours of labor.*

SECTION 1. No * * * child under fourteen years of age shall work as an operative in any factory or in any factory or manufacturing establishment in this State more than ten hours in any one day of twenty-four hours. All contracts made or to be made for the employment * * * of any child under fourteen years of age, as an operative in any factory or manufacturing establishment to work more than ten hours in any one day of twenty-four hours, are and shall be void.

Sec. 2. Any person having the authority to contract for the employment of persons as operatives in any factory or manufacturing establishment, who shall engage or contract with * * * any child under fourteen years of age to work as an operative in such factory or manufacturing establishment during more than ten hours in any one day of twenty-four hours, shall be guilty of a misdemeanor, and be fined not less than five nor more than twenty dollars.

ACTS OF 1895-96.

CHAPTER 644.—*Certain employments forbidden.*

SECTION 2. It shall be unlawful for any person having the care, custody or control of any child under the age of fourteen years to sell, apprentice, give away, let, or hire out, or otherwise dispose of such child to any person in or for the vocation or occupation, service, or purpose of rope or wire walking, begging or peddling, or as a gymnast, contortionist, rider, or acrobat in any place whatsoever, or for any obscene, indecent or immoral purpose, exhibition, or practice whatsoever, or for or in any business, exhibition or vocation injurious to the health or morals or dangerous to the life or limb of such child, or cause, procure, encourage or permit any such child to engage therein.

Sec. 3. It shall also be unlawful for any person to take, receive, hire, employ, use, exhibit, or have in custody any child under the age aforesaid for any of the purposes prohibited in the second section of this act.

Sec. 6. Whenever any person or persons having the care or custody of any child within the age previously mentioned in this act shall engage, hire out, or use such child in or for any business, exhibition, vocation, or purpose prohibited in this act, or shall permit the use of such child therefor, and shall be convicted of the same, the court or magistrate before whom such conviction is had may, at his discretion, if he should think it desirable for the welfare of such child, deprive the person or persons so convicted of the custody of such child, and thereafter such child shall be deemed in the custody of the court, and thereupon such proceedings shall be had as

to the commitment, custody, care, and education of such child as are provided for in section five of this act.

SEC. 7. A person convicted under any of the provisions of this act shall be deemed guilty of a misdemeanor, and shall be punished by a fine not exceeding two hundred dollars or by imprisonment in jail not exceeding twelve months, or both.

SEC. 8. In this act the word "person" shall be construed to include corporations, partnerships, companies, and associations, as well as individuals.

ACTS OF 1897-98.

CHAPTER 572.—*Earnings of minors.*

SECTION 1. The wages of a minor shall not be liable to garnishment or otherwise liable to the payment of the debts of parents.

ACTS OF 1902-03.

CHAPTER 156.—*Night work—Age limit.*

SECTION 1. No child under the age of fourteen years and over twelve years of age shall be employed in any manufacturing, mechanical, or mining operations in this Commonwealth to work between the hours of six o'clock postmeridian and seven o'clock antemeridian; and no child under the age of twelve years shall be employed in any manufacturing, mechanical, or mining operation in this Commonwealth; and any owner, agent, superintendent, overseer, foreman, or manager of any manufacturing, mechanical, or mining operation who shall knowingly employ, or permit to be employed, in the operation of which he is owner, agent, superintendent, overseer, foreman, or manager any child contrary to the provisions of this act, and any parent or guardian who allows or consents to such employment of his child or ward, shall, upon conviction of such offense, be fined not less than twenty-five dollars nor more than one hundred dollars.

WASHINGTON.

CODES AND STATUTES OF 1897.

TITLE 18.—*Employment in mines.*

SECTION 3172. No boy under the age of fourteen years * * * shall be employed or permitted to be in any mine for the purpose of employment therein, nor shall a boy under the age of twelve years be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment: *Provided, however,* That this prohibition shall not affect the employment of a boy of suitable age in an office or in the performance of clerical work at a colliery. When an employer is in doubt as to the age of any boy applying for employment in or about a mine or colliery, he shall demand and receive proof of the age of such boy by certificate from the parents or guardian of such boy before he shall be employed.

TITLE 25.—*Earnings of minors.*

SECTION 4583. When a contract for the personal services of a minor has been made with him alone, and those services are afterwards performed, payment made therefor to such minor in accordance with the terms of the contract is a full satisfaction for those services, and the parents or guardian can not recover therefor.

ACTS OF 1899.

CHAPTER 140.—*Employment during school term—Illiterates.*

SECTION 5. No child under the age of fifteen years shall be employed in any manufacturing, mechanical or mercantile establishment, or by any telegraph or telephone company in this State, except during the vacations of the public schools of

the city in which such child resides, unless during the twelve months next preceding such employment, he shall have attended school as provided for in section one of this act, or has already attained a reasonable proficiency in the common school branches for the first eight years as outlined in the course of study for common schools of the State of Washington, or shall have been excused by the board of directors of the city in which such child resides; nor shall such employment continue unless such child shall attend school each year, or until he shall have acquired the elementary branches of learning taught in public schools as above provided.

SEC. 6. No child under the age of fifteen years shall be so employed who does not present a certificate made by or under the direction of the board of directors of the district in which such child resides, of his compliance with the requirements of section five of this act; and said certificate shall also give the place and date of birth of such child as nearly accurate as may be; and every owner, superintendent or overseer of any establishment or company employing any such child shall keep such certificate on file so long as such child is employed therein. The form of said certificate shall be furnished by the superintendent of public instruction.

SEC. 7. Every owner, superintendent, or overseer of any such establishment or company who employs or permits to be employed any child in violation of any of the provisions of the two next preceding sections, and every parent or guardian who permits such employment, shall be fined not exceeding twenty-five dollars.

SEC. 8. The truant officers shall, at least once in every school term, and as often as the board of directors shall require, visit the establishments or companies employing such children in their respective cities, and ascertain whether the provisions of the three next preceding sections hereof are duly observed, and report all violations thereof to the said board.

SEC. 9. The truant officers shall demand the names of the children under fifteen years of age employed in such establishments or companies in their respective cities, and shall require the certificates of age and school attendance, prescribed in section 6 of this act, to be produced for their inspection; and a refusal to produce such certificate shall be punished by a fine not exceeding twenty-five dollars.

SEC. 10. Every owner, superintendent or overseer of any such establishment or company who employs or permits to be employed therein a child under sixteen years of age who can not write his name, age and place of residence legibly, while the public schools in the city where such child lives are in session, shall for every such offense be fined not exceeding twenty-five dollars.

ACTS OF 1903.

CHAPTER 135.—*Night work in bakeries.*

SECTION 9. No employer shall require, permit or suffer any person under sixteen years of age to work in his bake shop between the hours of eight o'clock in the evening and five o'clock in the morning.

SEC. 10. Any person who violates the provisions of this act * * * shall be guilty of a misdemeanor, and on conviction thereof before any court of competent jurisdiction, shall be fined not less than twenty-five nor more than fifty dollars or imprisoned not more than ten days for the first offense; and shall be fined not less than fifty nor more than one hundred dollars and imprisoned not less than ten nor more than thirty days for each offense after the first.

CHAPTER 136.—*Female messengers—Age limit.*

SECTION 1. No female person under eighteen years of age shall be employed as public messenger by any person, telegraph company, telephone company, or messenger company in this State, nor shall any child of either sex under the age of fourteen years be hired out to labor in any factory, mill, workshop or store at any time, provided that any superior court judge, living within the residence district of any such child, may issue a permit for the employment of any child between the ages of twelve and fourteen years at any occupation, not in his judgment, dangerous or injurious to the health or morals of such child, upon evidence, satisfactory to him, that the labor of such child is necessary for its support or for the assistance of any invalid parent. Such permits shall be issued for a definite time but shall be revocable at the discretion of the judge by whom they are issued.

SEC. 2. Any employer, overseer, superintendent, or agent of such employer, who shall violate any of the provisions of this act shall, upon conviction thereof, be fined for each offense not less than \$50 nor more than \$100, or be imprisoned in the county jail not exceeding one month.

WEST VIRGINIA.

CODE—EDITION OF 1899.

APPENDIX.

Employment in mines.

(Page 1047.)

SECTION 13. No boy under twelve years of age * * * shall be permitted to work in any coal mine, and in all cases of doubt, the parents or guardians of such boys shall furnish affidavits of their ages.

SEC. 17. The operator or agent of any coal mine, who shall willfully neglect or refuse to perform the duties required of him by any section of this act, or who shall violate any of the provisions hereof, and any person who shall neglect or refuse to perform the duties required of him by sections * * * thirteen * * * or who shall violate any of the provisions thereof, * * * shall be guilty of a misdemeanor, and upon conviction, shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars; in default of payment of such fine and costs for the space of ten days, the defendant may in the discretion of the court, be imprisoned in the county jail for a period not exceeding three months.

SEC. 18. The provisions of this act shall apply only to coal mines in which ten or more persons are employed in a period of twenty-four hours.

Age limit.

(Page 1055.)

SECTION 1. No minor under twelve years of age shall be employed in any mine or in any factory, workshop, manufactory or establishment where goods or wares are manufactured; and in all cases of minors applying for work, it shall be the duty of the manager, superintendent, foreman or operator, to see that the provisions of this section are complied with.

SEC. 2. Any manager, superintendent, foreman, or operator of such mine, factory, workshop, manufactory, or establishment, and parents or guardians, allowing a child, under twelve years of age, to work in violation of section first of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than ten dollars nor more than twenty dollars for each and every such offense.

ACTS OF 1901.

CHAPTER 14.—*Certain employments forbidden.*

SECTION 2. Any person having the care, custody, or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away, or otherwise dispose of such child, or any person who shall take, receive or employ such child for the vocation or occupation of rope or wire walking or as an acrobat, gymnast, contortionist or rider, and any person who, having the care, custody, or control of any minor child whatsoever, shall sell, apprentice, give away or otherwise dispose of such child, or who shall take, receive or employ such child for any obscene, indecent or illegal exhibition or vocation, or any vocation injurious to the health, or dangerous to the life or limb, of such child engaged therein, or for the purpose of prostitution, and any person who shall retain, harbor, or employ any minor child in or about any assignation house or brothel, or any place where any obscene, indecent or illegal, exhibition takes place, shall be guilty of a misdemeanor, and shall be fined not less than five dollars, nor more than one hundred dollars, for each offense.

SEC. 3. Any person having the care, custody, or control, lawful or unlawful, of any minor child under the age of eighteen years, who shall use such minor, or apprentice, give away, let out, hire or otherwise dispose of, such minor child to any person, for the purpose of singing, playing on musical instruments, begging or for any mendicant business whatsoever in the streets, roads, or other highways of this State, and who-soever shall take, receive, hire, employ, use or have in custody, any minor for the vocation, occupation, calling, service or purpose of singing, playing upon musical instruments or begging upon the streets, roads or other highways of this State, or for any mendicant business whatever, shall be guilty of a misdemeanor and shall be fined not less than five dollars nor more than one hundred dollars.

SEC. 4. Any person having the care, custody, or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away or permit such child to sing, dance, act, or in any manner exhibit it in any dance house, concert-saloon, theater or place of entertainment where wines or spirituous or malt liquors are sold or given away, or with which any place for the sale of wines or spirituous or malt liquors is directly or indirectly connected by any passageway or entrance, and any proprietor of any dance house whatever, or any such concert saloon, theater, or place of entertainment, so employing any such child, shall be guilty of a misdemeanor, and shall be fined not less than five dollars nor more than one hundred dollars for each offense.

WISCONSIN.

ANNOTATED STATUTES OF 1898.

CHAPTER 83.—*Hours of labor—Age limit.*

SECTION 1728. In all manufactories, workshops or other places used for mechanical or manufacturing purposes the time of labor of children under the age of eighteen years * * * employed therein shall not exceed eight hours in one day; and any employer, stockholder, director, officer, overseer, clerk or foreman who shall compel * * * any such child to labor exceeding eight hours in any one day, or who shall permit any child under fourteen years of age to labor more than ten hours in any one day in any such place, if he shall have control over such child sufficient to prevent it, or who shall employ at manual labor any child under twelve years of age in any factory or workshop where more than three persons are employed, or who shall employ any child of twelve and under fourteen years of age in any such factory or workshop for more than seven months in any one year shall be punished by fine not less than five nor more than fifty dollars for each such offense.

SEC. 1728a. No child under fourteen years of age shall be employed at labor or service in any mine, factory, workshop or place of public entertainment or amusement except upon permit as hereinafter provided; but nothing herein shall interfere with or prohibit the employment of such child in the service of its parents outside of school hours. The county judge of the county wherein any child resides may, by order entered of record, grant a permit and deliver a copy thereof under seal to any child over twelve years of age exempting such child from the operation of this section as to employment. Every such permit shall specify the conditions and the time during which such child may be employed and fix such limitations as to said judge shall seem proper; and in determining whether such permit shall be granted the judge shall consider the moral and physical condition of the child, his state of education, the necessities of the family to which such child belongs and such other circumstances as, in the discretion of the judge, ought to affect the question of exemption. No charge or fee shall be required in any matter under this section: *Provided*, That where such child resides at a distance of more than ten miles from the county seat the power to grant permits herein conferred upon the county judge may, under the same limitations and with the same conditions, be exercised by the mayor of the city or the president of the village in which or nearest to which said child or its parents resides. Any person, company, firm or corporation that employs or permits to be employed at work any child in violation of the foregoing provisions and any parent or other person having the control of any such child who permits such employment shall be punished by a fine of not less than ten dollars nor more than fifty dollars.

CHAPTER 186.—*Certain employments forbidden.*

SECTION 4587a. Any person having the care, custody or control of any child under the age of fourteen years who shall exhibit, use or employ, or in any manner or under any pretense sell, apprentice, give away, let out or otherwise dispose of such child to any person for any obscene, indecent or immoral purpose, exhibition or practice, or for any business, exhibition or vocation injurious to the health or dangerous to the life or limb of such child, or who shall cause, procure or encourage any such child to engage therein, and any person who shall take, receive, hire, employ, use, exhibit or have in custody any such child for any such purpose shall be punished by imprisonment in the county jail not exceeding six months or by fine of not more than one hundred dollars, or by both imprisonment and fine.

ACTS OF 1899.

CHAPTER 79.—*Employment in cigar factories.*

SECTION 6. No person under eighteen years of age shall be employed or permitted to work in a cigar shop or a cigar factory at manufacturing cigars for longer than eight hours a day or forty-eight hours a week.

Sec. 8. Any person violating any provision of this act shall be punished by fine not exceeding twenty-five dollars and no less than ten dollars for the first offense, and by fine not exceeding fifty dollars, and no less than twenty-five dollars for the second and each following offense.

CHAPTER 274.—*Age limit—Employment during school term—Hours of labor—Night work—Employment on elevators.*

SECTION 1 (as amended by chapter 349, acts of 1903). No child between the ages of fourteen and sixteen years shall be employed at any time in any factory or workshop, bowling alley, barroom, beer garden, in or about any mine, store, office, hotel, mercantile establishment, laundry, telegraph, telephone, public messenger service or work for wages at any gainful occupation at any place, unless there is first obtained from the commissioner of labor, State factory inspector, any assistant factory inspector, or from the judge of the county court or municipal court or from the judge of a juvenile court where such child resides, a written permit authorizing the employment of such child within such time or times as the said commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court may fix. No child under fourteen years of age shall be employed at any time in any factory or workshop, bowling alley, barroom, beer [beer] garden, or in or about any mine. No child under fourteen years shall be employed, required or suffered to work for wages at any gainful occupation at any time except that during the vacation of the public school in the town, district or city where any child between the ages of twelve and fourteen years resides, it may be employed in any store, office, hotel, mercantile establishment, laundry, telegraph, telephone or public messenger service in the town, district or city where it resides, and not elsewhere: *Provided*, That there is first obtained from the commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge, or from the judge of a juvenile court where such child resides, a written permit authorizing the employment of such child within such time or times as the said commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court shall keep a record, stating the name, date and place of birth, and place of school attended by any such child, and the county judge, municipal judge or such judge of a juvenile court shall report when so requested by the commissioner of labor or State factory inspector, the number of permits issued by him from time to time as hereinbefore provided. When the commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge, or judge of a juvenile court has reason to doubt the age of any child who applies for such permit, commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court shall demand proof of such child's age by the production of a verified baptismal certificate or a duly attested birth certificate, or in case such certificate can not be secured, by the record of age stated in the first school enrollment of such child, and if such proof does not exist or can not be secured then by the production of such other proof as may be satisfactory to said commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court, and no permit shall be issued unless proof of such child's age is filed with the said commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court. Whenever it appears that a permit has been obtained by a wrong or false statement as to any child's age, the commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge or judge of a juvenile court of the county where such child resides shall revoke such permit.

Sec. 2 (as amended by chapter 349, acts of 1903). It shall be the duty of every person, firm or corporation, agent or manager of any firm or corporation employing minors in any mine, factory or workshop, bowling alley, barroom, beer garden, store, office, hotel, mercantile establishment, laundry, telegraph, telephone or public messenger service within this State to keep a register in the place where such

minor is employed and subject at all times to the inspector, or assistant factory inspector, in which register shall be recorded the name, age and date of birth, place of residence, of every child employed, permitted or suffered to work therein, under the age of sixteen years, and it shall be unlawful for any person, firm or corporation, agent or manager of any firm or corporation to hire or employ, permit or suffer to work in any mine, mercantile establishment, factory or workshop, bowling alley, barroom, beer garden, store, office, hotel, laundry, telegraph, telephone or public messenger service, any child under sixteen years of age unless there is first provided and placed on file in such mine, mercantile establishment, factory or workshop, bowling alley, barroom, beer garden, store, office, hotel, laundry, telegraph, telephone or public messenger [office], a permit granted by either the commissioner of labor, State factory inspector, any assistant factory inspector, county judge, municipal judge, or judge of a juvenile court of the county where such child resides.

SEC. 3 (as amended by chapter 349, acts of 1903). No person under the age of sixteen years shall be employed, required, permitted or suffered to work for wages at any gainful occupation longer than ten hours in any one day, nor more than six days in any one week, nor after the hour of nine at night nor before the hour of six in the morning: *Provided*, That this section shall not apply to boys carrying newspapers between the hours of four and six in the morning.

SEC. 4 (as amended by chapter 349, acts of 1903). It shall be the duty of the commissioner of labor, the factory or assistant factory inspector to enforce the provisions of this act, and to prosecute violation of the same before any court of competent jurisdiction in this State. It shall be the duty of said commissioner of labor or the factory or assistant factory inspectors, and they are hereby authorized and empowered to visit and inspect, at all reasonable times, and as often as possible, all places covered by this act.

SEC. 5 (as amended by chapter 349, acts of 1903). The commissioner of labor, the factory or assistant factory inspector shall have the power to demand a certificate of physical fitness, from some regularly licensed physician, in the case of children who may seem physically unable to perform the labor at which they may be employed, and no minor shall be employed who can not obtain such a certificate.

SEC. 6 (as amended by chapter 349, acts of 1903). No firm, person or corporation shall employ or permit any child under sixteen years of age to have the care, custody, management or operation of any elevator.

SEC. 7 (as amended by chapter 349, acts of 1903). The words "manufacturing establishment," "factory" or "workshop" as used in this act, shall be construed to mean any place where goods or products are manufactured or repaired, dyed, cleaned or stored [sorted], stored or packed, in whole or in part, for sale or for wages, and not for the personal use of the maker or his or her family or employer.

SEC. 8 (as amended by chapter 349, acts of 1903). Any person, firm or corporation, agent or manager of any corporation who, whether for himself or for such firm or corporation or by himself or through agents, servants, or foreman, shall violate or fail to comply with any of the provisions of this act or shall hinder or delay the commissioner of labor, the factory or assistant inspectors or any or either of them in the performance of their duty or refuse to admit or shut or lock them out from any place required to be inspected by this act, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than ten dollars nor more than one hundred dollars for each offense. Any corporation which, by its agents, officers or servants, shall violate or fail to comply with any of the above provisions of this act shall be liable to the above penalties, which may be recovered against such corporations in action for debt or assumpsit brought before any court of competent jurisdiction.

SEC. 9 (as amended by chapter 349, acts of 1903). Any parent or guardian, who suffers or permits a child to be employed, or suffered or permitted to work, in violation of this act shall be guilty of a misdemeanor and upon conviction thereof, shall be fined not less than five nor more than twenty-five dollars.

SEC. 10 (as amended by chapter 349, acts of 1903). When in any proceeding in any court under this section there is any doubt as to the age of any child, a verified baptismal certificate or a duly attested birth certificate shall be produced and filed with the court. In case such certificates can not be secured, upon proof of such fact, the record of age stated in the first school enrollment of such child shall be admissible as evidence thereof.

CHAPTER 330. — *Certain employments forbidden.*

SECTION 3. No license shall be granted for a theatrical exhibition or public show in which children under fifteen years of age are employed as acrobats, contortionists or in any feats of gymnastics or equestrianism, when in the opinion of the board of

officers authorized to grant licenses such children are employed in such manner as to corrupt their morals or impair their physical health.

SEC. 4. Any person who shall violate any of the provisions of this act shall, upon conviction, be fined in a sum not exceeding one hundred dollars.

ACTS OF 1903.

CHAPTER 402.—*Female messengers.*

SECTION 1. No female under eighteen years of age shall be employed as a messenger by any telegraph or telephone company, firm or corporation or by any company, firm, corporation or individual engaged in similar business.

SEC. 2. Whoever violates the provisions of this act shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars or by imprisonment for not more than six months.

WYOMING.

CONSTITUTION.

ARTICLE 9.—*Employment in mines.*

SECTION 3. No boy under the age of fourteen years and no woman of any age shall be employed or permitted to be in or about any coal, iron or other dangerous mines for the purpose of employment therein: *Provided, however,* This provision shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at such mine or colliery.

REVISED STATUTES—1899.

DIVISION I.

TITLE 16.—*Certain employments forbidden—Employment in mines.*

SECTION 2289. It shall be unlawful for any person having the care, custody or control of any child under the age of fourteen years to exhibit, use or employ, or in any manner, or under any pretense, sell, apprentice, give away, let out or otherwise dispose of any such child to any person, in or for the vocation or occupation, service or purpose of singing, playing on musical instruments, dancing, rope or wire walking, begging or peddling, or as a gymnast, contortionist, rider or acrobat, in any place whatsoever; or as an actor or performer in any concert hall or room where intoxicating liquors are sold or given away, or in any variety theater, or for any illegal, obscene, indecent or immoral purpose, exhibition or practice whatsoever; or for or in any business exhibition or vocation, injurious to the health or dangerous to the life or limb of such child, or cause, procure or encourage such child to engage therein. Nothing in this section contained shall apply to or affect the employment or use of any child as a singer or musician in any church, school or academy, or at any respectable entertainment, or the teaching or learning the science or practice of music. It shall be unlawful for any person to take, receive, hire, employ, use, exhibit or have in custody any child, under the age, and for the purposes prohibited in this section.

SEC. 2295. Any person who shall take, receive, hire or employ, either in his or her own behalf, or as the agent, servant or employee of any person, persons, association of persons, copartnership, company, corporation, any boy or male child under the age of fourteen years, or any woman or girl of any age, or shall allow or permit the said persons to be in or about any coal, iron or other dangerous mine, or underground works or dangerous place whatsoever in this State, for the purpose of employment therein or thereabouts, shall be fined not less than twenty-five dollars, nor more than one hundred dollars to which may be added imprisonment in the county jail not more than six months: *Provided, however,* That the provisions of this section shall not affect or apply to the employment of a boy or female of suitable age in an office, or in the performance of clerical work at such mine, colliery or place.

ACTS OF 1903.

CHAPTER 25. —*Mining regulations.*

SECTION 8. No person * * * under eighteen years of age shall be employed as hoisting engineer.

UNITED STATES.

ACTS OF 1890-91.

CHAPTER 564.—*Employment in mines.*

SECTION 12. No child under twelve years of age shall be employed in the underground workings of any mine. And no father or other person shall misrepresent the age of anybody so employed. Any person guilty of violating the provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not to exceed one hundred dollars.

[This section applies to coal mines in the Territories of the United States.]

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

[It is the purpose of this Bureau to publish from time to time important agreements made between large bodies of employers and employees with regard to wages, hours of labor, etc. The Bureau would be pleased to receive copies of such agreements whenever made.]

BITUMINOUS COAL MINING.

Indianapolis Interstate Agreement for Years Beginning April 1, 1904, and Ending March 31, 1906.

It is hereby agreed, that the interstate agreement of the present year shall be continued with the same conditions for two years from April 1, 1904, until March 31, 1906, with the following exceptions, to wit:

FIRST. That the price for mining be reduced five cents (5 cents) per ton on inch and a quarter ($1\frac{1}{4}$ inch) screened lump coal, pick mining, in western Pennsylvania thin vein, the Hocking, the basing district of Ohio, and in both block and bituminous districts of Indiana; three cents (3 cents) per ton on mine-run coal, pick mining, in the bituminous district of Indiana, and at Danville, the basing point of Illinois.

SECOND. That the price for machine mining be reduced four cents (4 cents) per ton on screened lump coal in western Pennsylvania thin vein, and the Hocking, the basing district of Ohio; five cents (5 cents) per ton on screened lump coal in the block and bituminous districts of Indiana, and three cents (3 cents) per ton on mine-run coal in the bituminous district of Indiana, and at Danville, the basing point of Illinois.

THIRD. That the inside day wage scale shall be as follows, with the conditions of the Columbus day wage scale agreement of 1898, to wit:

Track layers	\$2.42
Track layers' helpers	2.23
Trappers	1.06
Bottom cages	2.42
Drivers	2.42
Trip riders	2.42
Water haulers and machine haulers	2.42
Timbermen, where such are employed	2.42
Pipe men, for compressed air plants	2.36
Company men in long-wall mines of third-vein district of northern Illinois ...	2.23
All other inside day labor	2.23

FOURTH. That yardage and dead work be reduced in the same proportion.

FIFTH. That internal differences in any of the States or districts, both as to prices and conditions, shall be referred to the States or districts affected for adjustment.

Further, in pursuance of the authority vested in us, we hereby call a joint convention of the coal operators and miners of western Penn-

sylvania, Ohio, Indiana and Illinois to meet at Indianapolis, Ind., at 10 o'clock a. m., January 25, 1906.

The foregoing scale having been unanimously agreed to by the duly qualified representatives of the operators and miners of the four States of (western) Pennsylvania, Ohio, Indiana and Illinois, by virtue of the authority vested in us by the operators and miners of the States aforesaid, we hereunto attach our signatures.

In behalf of operators:

In behalf of miners:

THIN VEIN DISTRICT OF PENNSYLVANIA.

Francis L. Robbins,
G. W. Schluederberg.

P. Dolan,
Wm. Dodds.

OHIO.

John H. Winder,
J. J. Roby.

W. H. Haskins,
G. W. Savage.

INDIANA (BLOCK DISTRICT).

J. H. McClelland.

Wm. M. Zeller,
William Wilson.

INDIANA (BITUMINOUS DISTRICT).

W. S. Bogle,
J. C. Kolsem.

Geo. Hargrove,
J. H. Kennedy.

ILLINOIS.

H. N. Taylor,
J. H. Garaghty.

Thos. J. Reynolds,
W. D. Ryan.

In behalf of the United Mine Workers of America:

John Mitchell, President.
T. L. Lewis, Vice-President.
W. B. Wilson, Sec.-Treas.

Signed at Indianapolis, Ind., March 21, 1904.

Attest:

F. S. Brooks, Secretary.

Illinois State Agreement from April 1, 1904, to March 31, 1906.

Whereas, a contract between the operators of the competitive coal fields of western Pennsylvania, Ohio, Indiana and Illinois, and the United Mine Workers of America, has been entered into at the city of Indianapolis, Indiana, March 21, 1904, fixing a scale of mining prices, day wages and conditions, for certain base points therein set forth, to continue in force and effect for two years from April 1, 1904, and

Whereas, this contract fixes the pick mining price of bituminous mine-run coal at Danville at fifty-two (52 cents) per ton of two thousand (2,000) pounds; therefore be it

Resolved, That the prices for pick-mined coal throughout the State for two years beginning April 1, 1904, shall be as follows:

FIRST DISTRICT.

Streator, Cardiff, Clarke City and associated mines, including Toluca thick vein..... \$0.61

(NOTE.—The matter of the clay parting at Streator to be referred to sub-district convention for adjustment.)

Third vein and associated mines, including third vein at Streator, including twenty-four inches of brushing..... .79
Wilmington and associated mines, including Cardiff long wall and Bloomington thin vein, including brushing..... .84
Bloomington thick vein..... .74
Pontiac, including twenty-four inches of brushing..... .84
Pontiac, top vein..... .61

Marseilles, Seneca and Morris. (Referred to a joint committee of two miners and two operators, who shall take action prior to May 15, 1904, the scale to be in force from April 1, 1904, and in default of an agreement the matter shall be referred to the two State executive boards.)

Cornell, long wall, third vein conditions..... .79
Cornell, room and pillar..... .69

SECOND DISTRICT.

Danville, Westville, Grape Creek and associated mines in Vermilion County. \$0.52

THIRD DISTRICT.

Springfield, Dawson and associated mines..... \$0.52⁷/₈
Lincoln and Niantic..... .56
Colfax..... .56

FOURTH DISTRICT.

Mines on C. & A. south of Springfield, to and including Carlinville; including Taylorville, Pana, Tower Hill, Litchfield, Hillsboro, Witt (Paisley), Divernon, and Pawnee..... \$0.52
Assumption long wall, including twenty-four inches of brushing..... .68¹/₂
Assumption upper vein, including twenty-four inches of brushing..... .87
Moweaqua, room and pillar..... .56
Decatur, long wall, present conditions..... .67
Decatur, room and pillar. (Referred to the State president of the United Mine Workers and the commissioner of the Illinois Coal Operators' Association to fix the mining price, and if they can not agree by May 1st it shall be taken up by the State executive boards; the rate so determined to be a part of this contract.)
Raymond, referred for local settlement.

FIFTH DISTRICT.

Glen Carbon, Belleville and associated mines, to and including Percy, Pinckneyville, Williesville and Nashville..... \$0.52
Coal five feet and under..... .57

SIXTH DISTRICT.

Duquoin, Olin, Sandoval, Centralia and associated mines..... \$0.48
Salem and Kinmundy..... .53

SEVENTH DISTRICT.

Mount Vernon	\$0. 53
Jackson County	. 48
(All coal five feet and under, five cents extra per ton; this not to apply to lower bench, nor rolls or horsebacks.)	
Lower bench, Jackson County, for shipping mines, miners to carry fourteen inches brushing	. 61
Saline County	. 48
(Saline County question of low coal referred to joint subdistrict for adjustment.)	
Williamson County	. 45

EIGHTH DISTRICT.

Fulton and Peoria counties, thin or lower vein (third vein conditions)	\$0. 79
Fulton and Peoria counties, No. 5 vein	. 59
Astoria, No. 5 vein (Fulton and Peoria counties conditions)	. 59
Fulton and Peoria counties, No. 6 vein (with Kewanee and Etherley conditions, undercutting and wedging the coal; and if they can not obtain members of the U. M. W. of A. to mine the coal under these terms and conditions, it shall be the privilege of the operators to call for a meeting of the joint executive boards of the miners and operators, and said joint executive boards shall fix a rate for shooting coal in that seam)	. 68
Gilchrist, Wanlock, Cable, Sherrard and Silvis mines, sixty-three cents per ton, with last year's conditions. In case of deficient work, where miner and mine manager can not agree as to compensation, the mine committee shall be called in, and, if they can not agree, the dispute shall be carried up under the thirteenth clause of the present scale.	
Kewanee, Etherley and Wyoming	. 68
Pottstown, No. 1 seam, scale to be the same as Gilchrist and Wanlock, except in the brushing of the top; that shall be settled by the subdistrict.	
Colchester, referred for local settlement.	
Pekin, shipping mines only, mining rate and dead work scale to be referred to President Perry, Commissioner Justi, one member of the U. M. W. of Illinois, and one member of the Illinois Coal Operators' Association, to be appointed by the respective organizations, together with such fifth party as they may agree upon, whose decision shall be made by a majority vote, not later than May 1, 1904, and be effective for two years from April 1, 1904; such decision to be based upon the competitive and mining conditions, between such mines and shipping mines in the Peoria district.	

NINTH DISTRICT.

Mount Olive, Staunton, Gillespie, Clyde, Sorento, Coffeen and Worden, and mines on the Vandalia line as far east as and including Smithboro, and on B. & O. S. W. as far east as Buxton	\$0. 52
Coal five feet and under	. 57

NO INCREASE IN COST EXCEPT AS PROVIDED.

First. The Indianapolis interstate convention, having adopted a mining and underground day labor scale, in effect April 1, 1904, no changes or conditions shall be imposed in the Illinois scale for the coming two years that increase the cost of production of coal in any district in the State, except as may be provided.

EMPLOYEES EXEMPTED FROM JURISDICTION OF U. M. W. OF A.

Second. No scale of wages shall be made by the United Mine Workers for mine manager, mine manager's assistant, top foreman, company

weighman, boss drivers, night boss, head machinist, head boiler maker, head carpenter, night watchman, hoisting engineers. The authority to hire and discharge shall be vested in the mine manager, top foreman and boss driver. The term "assistant" shall apply only to such as are authorized to act in that capacity. The night watchman shall be exempt when employed in that capacity only. The terms "head carpenter" and "head machinist" shall apply only to such as have general charge of carpentry or machine work at two or more mines, or at one mine and one or more washing plants.

NO MARKET RESTRICTION.

Third. Any operators paying the scale rate of mining and day labor under this agreement shall at all times be at liberty to load any railroad cars whatever, regardless of their ownership, with coal, and sell and deliver such coal in any market and to any person, firm or corporation that he may desire.

QUALITY OF MINE-RUN COAL. PUSHING COAL BY MINERS PROHIBITED.

Fourth. The scale of prices for mining per ton of two thousand pounds, run-of-mine coal herein provided for, is understood in every case to be for coal practically free from slate, bone and other impurities, loaded in cars at the face, weighed before screening; and that the practice of pushing coal by the miners shall be prohibited.

MINING AND SHOOTING TO BE ACCORDING TO STATE MINING LAW.

Fifth. (a) Whether the coal is shot after being undercut or sheared by pick or machine, or shot without undercutting or shearing, the miners must drill and blast the coal in accordance with the State mining law of Illinois, in order to protect the roof and timbers and in the interest of general safety. Any miner who persistently violates the letter or spirit of this clause shall be discharged.

(b) The system of paying for coal before screening was intended to obviate the many contentions incident to the use of screens, and was not intended to encourage unworkmanlike methods of mining and blasting coal, or to decrease the proportion of screened lump, and the operators are hereby guaranteed the hearty support and cooperation of the United Mine Workers of America in disciplining any miner who from ignorance or carelessness, or other cause, fails to properly mine, shoot and load his coal.

PENALTIES FOR LOADING IMPURITIES.

Sixth. In case slate, bone, clay, sulphur or other impurities are sent up with the coal by the miner, it shall be the duty of whomever the company shall designate as inspector to report the same, with the estimated weight thereof, and the miner or miners so offending shall have such weight deducted from the established weight of the car, and for the first offense in any given month shall be fined fifty cents; for the second offense in the same month he or they shall, at the option of the operator be fined two dollars or suspended for two working days; and for the third, or any subsequent offense in the same month, or in malicious

or aggravated cases for the first, or any subsequent offense, the operator may indefinitely suspend or discharge.

The company weighman shall post in a conspicuous place at the pit head the names of all miners dealt with hereunder.

The inspector designated by the operator shall be a member of the U. M. W. of A., but in the discharge of the duties herein specified shall not be subject to the jurisdiction of the local union or president or pit committee, and against any miner or committeeman seeking in any way to embarrass the inspector in or because of the discharge of such duties the provisions of the miners' State constitution shall be invoked, and in addition he shall at the option of the operator be suspended for two working days.

In case it shall be alleged by either the local representative of the miners, or by the operator, that the inspector is not properly performing his duties hereunder, it shall be so reported to the miners' sub-district president, who shall, within twenty-four hours after the receipt of notification, take it up with the superintendent of the company for adjudication; and, if it shall be found that the inspector is not faithfully performing such duties, he shall be discharged or transferred to other duties, as the operator may elect.

The proceeds of all fines hereunder shall be paid to the miners' sub-district treasurer, and under no circumstances shall any such fines be remitted or refunded.

PAY DAYS AND STATEMENTS OF ACCOUNT.

Seventh. The miners of the State of Illinois are to be paid twice a month, in lawful money, the balance due them, the dates of pay to be determined locally, but in no event shall more than one-half month's pay be retained by the operator. When any number of men at any mine so demand, statements will be issued to all employees not less than twenty-four hours prior to pay day. The miners and operators shall decide locally as to the form and manner in which statements shall be issued. No commission will be charged for wages advanced to employees between pay days, but any advances between pay days shall be at the option of the operator.

POWDER—PRICE AND QUALITY.

Eighth. The price for powder per keg shall be \$1.75. The miners agree to purchase their powder from the operators, provided it is furnished of standard grade and quality; that to be determined by the operators and expert miners jointly, where there is a difference. Powder to be delivered at the face when requested.

BLACKSMITHING.

Ninth. The price for blacksmithing for pick mining shall be six-tenths of a cent per ton for room and pillar work, and twelve and one-half cents per pay per man, or twenty-five cents per month, for long wall for pick and drill sharpening.

OIL.

Tenth. It is understood that there is no agreement as to the price of oil.

INSIDE DAY WAGE SCALE.

Eleventh. Pursuant to the Indianapolis agreement of March 21, 1904, the inside day wage scale shall be as follows:

Track layers	\$2.42
Track layers' helpers	2.23
Trappers	1.06½
Bottom cagers	2.42
Drivers	2.42
Trip riders and grippers	2.42
Water haulers and machine haulers	2.42
Timbermen, where such are employed	2.42
Pipe men, for compressed air plants	2.36
Brushers in long-wall mines, third vein and Wilmington fields, northern Illinois	2.42
Other company men in long-wall mines of third vein and Wilmington fields, northern Illinois	2.23
All other inside day labor	2.23

Provided, that all classes of underground day labor, not specified above, whose rates have been fixed locally, shall be reduced 5.55 per cent.

DEFINITION OF EIGHT-HOUR DAY FOR MINERS.

Twelfth. The above scale of mining prices is based upon an eight-hour workday, and it is definitely understood that this shall mean eight hours' work at the face, exclusive of noon time, six days a week, or forty-eight hours in the week, provided the operator desires the mine to work, and no local ruling shall in any way affect this agreement, or impose conditions affecting the same.

OVERTIME FOR DAY LABOR.

Any class of day labor may be paid, at the option of the operator, for the number of hours and fractions thereof actually worked, at an hour rate based on one-eighth of the scale rate per day. Provided, however, that when the men go into the mine in the morning they shall be entitled to two hours' pay whether the mine hoists coal two hours or not, except in the event that they voluntarily leave their work during this time without the consent of the operator, they shall forfeit such two hours' pay. Provided, further, that overtime by day laborers, when necessary to supply railroad chutes with coal by night or Sunday, where no regular men therefor are exclusively employed, or when necessary in order not to impede the operation of the mine the day following, and for work which can not be performed or completed by the regular shift during regular hours without impeding the operation of the mine, may be performed and paid for at the same rate per hour.

DUTIES AND LIMITATIONS OF PIT COMMITTEE. ADJUSTMENT OF DISPUTES AND GRIEVANCES.

Thirteenth. (a) The duties of the pit committee shall be confined to the adjustment of disputes between the pit boss and any of the members of the United Mine Workers of America working in and around the mine, for whom a scale is made, arising out of this agreement, or any subdistrict agreement made in connection herewith, where the pit boss and said miner, or mine laborers, have failed to agree.

(b) In case of any local trouble arising at any shaft through such failure to agree between the pit boss and any miner or mine laborer, the pit committee and the miners' local president and the pit boss are empowered to adjust it; and, in case of their disagreement it shall be referred to the superintendent of the company and the president of the miners' local executive board, where such exists, and shall they fail to adjust it—and in all other cases—it shall be referred to the superintendent of the company and the miners' president of the sub-district; and, should they fail to adjust it, it shall be referred in writing to the officials of the company concerned and the State officials of the U. M. W. of A. for adjustment, and in all such cases, the miners and mine laborers and parties involved must continue at work pending an investigation and adjustment, until a final decision is reached in the manner above set forth.

WHEN DAY MEN ARE TO BE FURNISHED BY PIT COMMITTEE.

(c) If any day men refuse to continue at work because of a grievance which has or has not been taken up for adjustment in the manner provided herein, and such action shall seem likely to impede the operation of the mine, the pit committee shall immediately furnish a man or men to take such vacant place, or places, at the scale rate in order that the mine may continue at work; and it shall be the duty of any member, or members, of the United Mine Workers, who may be called upon by the pit boss, or pit committee, to immediately take the place or places assigned to him or them in pursuance hereof.

DUTIES AND LIMITATIONS OF PIT COMMITTEE.

(d) The pit committee, in the discharge of its duties, shall under no circumstances go around the mine for any cause whatever, unless called upon by the pit boss or by a miner or company man who may have a grievance that he can not settle with the boss; and, as its duties are confined to the adjustment of any such grievances, it is understood that its members shall not draw any compensation except while actively engaged in the discharge of said duties. Any pit committeeman who shall attempt to execute any local rule or proceeding in conflict with any provision of this contract, or any other made in pursuance hereof, shall be forthwith deposed as committeeman. The foregoing shall not be construed to prohibit the pit committee from looking after the matter of membership dues and initiations in any proper manner.

(e) Members of the pit committee employed as day men shall not leave their places of duty during working hours, except by permission of the operator, or in cases involving the stoppage of the mine.

RIGHT TO HIRE AND DISCHARGE.

(f) The right to hire and discharge, the management of the mine, and the direction of the working force, are vested exclusively in the operator, and the U. M. W. of A. shall not abridge this right. It is not the intention of this provision to encourage the discharge of employees, or the refusal of employment to applicants because of personal prejudice or activity in matters affecting the U. M. W. of A. If any employee shall be suspended or discharged by the company, and it is

claimed that an injustice has been done him, an investigation to be conducted by the parties and in the manner set forth in paragraphs (a) and (b) of this section shall be taken up promptly, and, if it is proven that an injustice has been done, the operator shall reinstate said employee and pay him full compensation for the time he has been suspended and out of employment; provided, if no decision shall be rendered within five days the case shall be considered closed, in so far as compensation is concerned, unless said failure to arrive at a decision within five days is owing to delay on the part of the operator, in which case a maximum of ten days' compensation shall be paid.

(g) It is understood and agreed that there shall be no more than three members on the pit committee at any one mine.

OUTSIDE DAY WAGE SCALE.

Fourteenth. The wages now being paid outside day labor at the various mines in this State, less a reduction of 5.55 per cent, shall constitute the wage scale for that class of labor during the life of this agreement; provided, that no top man shall receive less than \$1.91 per day.

FATAL ACCIDENTS AND FUNERALS.

Fifteenth. In the event of an instantaneous death by accident in the mine, the miners and underground employees shall have the privilege of discontinuing work for the remainder of that day; but work, at the option of the operator, shall be resumed the day following and continue thereafter. In case the operator elects to operate the mine on the day of the funeral of the deceased, as above, or where death has resulted from an accident in the mine, the individual miners and underground employees may, at their option, absent themselves from work for the purpose of attending such funeral, but not otherwise. And whether attending such funeral or not, each member of the U. M. W. of A. employed at the mine at which the deceased was employed, shall contribute fifty cents and the operator twenty-five dollars for the benefit of the family of the deceased, or his legal representatives, to be collected through the office of the company. In the event that the mines are thrown idle on account of the miners' or other employees' failure to report for work in the time intervening between the time of the accident and the funeral or on the day of the funeral, then the company shall not be called upon for the payment of the twenty-five dollars above referred to.

Except in case of fatal accidents as above, the mine shall in no case be thrown idle because of any death or funeral; but in the case of the death of any employee of the company or member of his family any individual miner may, at his option, absent himself from work for the purpose of attending such funeral, but not otherwise.

RESPONSIBILITY FOR TIMBERING AND DEAD WORK.

Sixteenth. (a) The scale of prices herein provided shall include, in ordinary conditions, the work required to load coal and properly timber the working places in the mine, and the operator shall be required to furnish the necessary props and timber in rooms or working face. And in long wall mines, it shall include the proper mining of the coal

and the brushing and care of the working places and roadway according to the present method and rules relating thereto, which shall continue unchanged.

(b) If any miner shall fail to properly timber, shoot and care for his working place, and such failure has entailed falls of slate, rock and the like, the miner whose fault has occasioned such damage, shall repair the same without compensation, and if such miner fails to repair such damage he may be discharged.

Any dispute that may arise as to the responsibility under this clause shall be adjusted by the pit committee and mine foreman, and in case of their failure to agree shall be taken up for settlement under the thirteenth section of this agreement.

In cases where the mine manager directs the placing of crossbars to permanently secure the roadway, then, and in such cases only, the miner shall be paid at the current price for each crossbar when properly set.

The above does not contemplate any change from the ordinary method of timbering by the miner for his own safety.

CHECK OFF.

Seventeenth. The operators will recognize the pit committee in the discharge of its duties as herein specified, but not otherwise, and agree to check off union dues, assessments and fines from the miners and mine laborers, when desired, on proper individual or collective continuous order, and furnish to the miners' local representative a statement showing separately the total amount of dues, assessments and fines collected. When such collections are made, card day shall be abolished. In case any fine is imposed the propriety of which is questioned, the amount of such fine shall be withheld by the operator until the question has been taken up for adjustment and a decision has been reached.

EMERGENCY WORK AND ORDINARY REPAIRS.

Eighteenth. The operators shall have the right in cases of emergency work or ordinary repairs to the plant, to employ in connection therewith such men as, in their judgment, are best acquainted with and suited to the work to be performed, except where men are permanently employed for such work. Blacksmiths and other skilled labor shall make any necessary repairs to machinery and boilers.

CONSTRUCTION AND EXTENSIVE REPAIRS.

Nineteenth. The erection of head frames, buildings, scales, machinery, railroad switches, etc., necessary for the completion of a plant to hoist coal, all being in the nature of construction work, are to be excluded from the jurisdiction of the United Mine Workers of America. Extensive repairs to or rebuilding the same class of work shall also be included in the same exception. The employees thereon to be excluded as above, when employed on such work only.

PENALTY FOR ABSENCE FROM WORK.

Twentieth. When any employee absents himself from his work for a period of two days, unless through sickness or by first having notified the mine manager and obtained his consent, he may be discharged.

MACHINE DIFFERENTIAL.

Twenty-first. (a) Except at the basing point, Danville, the differential for machine mining throughout the State of Illinois shall be seven cents per ton less than the pick mining rate. It being understood and agreed that the machine mining rate shall include the snubbing of coal either by powder or wedge and sledge, as conditions may warrant, where chain machine is used; but it is understood that this condition shall not apply where two men have and work in one place only in the same shift, except at the option of the miner; and it shall also be optional with the miner which system of snubbing shall be followed. The division of the machine mining rate shall be fixed in joint sub-district meeting.

SHEARING MACHINE AND AIR OR ELECTRIC DRILLS.

(b) The established rates on shearing machines and air or electric drills as now existing, shall remain unchanged during the ensuing two years.

RULES FOR USE OF CAGE BY EMPLOYEES.

Twenty-second. Any underground employee not on hand so as to go down to his work before the hour for commencing work, shall not be entitled to go below except at the convenience of the company. When an employee is sick or injured he shall be given a cage at once. When a cage load of men comes to the bottom of the shaft who have been prevented from working by reason of falls or other things over which they have no control, they shall be given a cage at once. For the accommodation of individual employees, less than a cage load, who have been prevented from working as above, a cage shall be run mid-forenoon, noon and mid-afternoon, of each working day; provided, however, that the foregoing shall not be permitted to enable men to leave their work for other than the reasons stated above.

SHAFT SINKING.

Twenty-third. The scale for sinkers shall be two dollars and eighty-seven cents, and for shift leaders three dollars and eighteen cents per day.

The scale for top men handling dirt at sinking mines shall be the same as that of dumpers in the subdistrict in which the mine is being sunk.

DEFINITION OF EIGHT-HOUR DAY FOR DAY LABOR.

Twenty-fourth. All classes of day labor are to work full eight hours, and the going to and coming from the respective working places is to be done on the day hand's own time. All company men shall perform whatever day labor the foreman may direct. An eight-hour day means eight hours' work in the mines at the usual working places, exclusive of noontime, for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from same at night.

DRIVERS—RULES TO GOVERN.

Drivers shall take their mules to and from the stables, and the time required in so doing shall not include any part of the day's labor; their time beginning when they reach the change at which they receive empty cars—that is, the parting drivers at the shaft bottom and the inside drivers at the parting—and ending at the same places; but in no case shall a driver's time be docked while he is waiting for such cars at the points named. The inside drivers, at their option, may either walk to and from their parting or take with them, without compensation, either loaded or empty cars, to enable them to ride. This provision, however, shall not prevent the inside drivers from bringing to and taking from the bottom regular trips, if so directed by the operator, provided such work is done within the eight hours.

HARNESSING AND UNHARNESSING MULES.

The methods at present existing covering the harnessing, unharnessing, feeding and caring for the mules, shall be continued throughout the life of this agreement; but in cases where any grievances exist in respect to the same, they shall be referred to the subdistrict meetings for adjustment.

When the stables at which the mules are kept are located on the surface and the mules are taken in and out of the mines daily by the drivers, the question of additional compensation therefor, if any, is to be left to the subdistricts affected for adjustment at their joint subdistrict meetings.

YARDAGE AND DEAD WORK.

Twenty-fifth. All yardage and dead work on which a scale has been established shall be reduced 5.55 per cent.

OPERATOR TO KEEP PLACES DRY AS PRACTICABLE.

Twenty-sixth. (a) The company shall keep the mine in as dry condition as practicable by keeping the water off the road and out of the working places. When a miner has to leave his working place on account of water, through the neglect of the company, they shall employ said miner doing company work when practicable, and provided that said miner is competent to do such work, or he will be given another working place until such water is taken out of his place.

WHERE TRACK IS LAID BY OPERATOR.

(b) Where it is an established condition or agreement that the track shall be laid by the company, and a miner has to leave his working place on account of such track not being laid through the neglect of the company, it shall employ said miner doing company work when practicable, provided said miner is competent to do such work, or he shall be given another place until such time as such track is laid in his place.

In the table following is shown the number of males and females employed in 1899, 1900, and 1901 receiving each specified weekly earnings:

PERSONS EMPLOYED IN 1899, 1900, AND 1901, BY CLASSIFIED WEEKLY EARNINGS.

Classified weekly earnings.	1899.			1900.			1901.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under \$5	8,021	9,128	17,149	7,202	8,615	15,817	6,906	9,058	15,964
\$5 or under \$6	2,609	2,362	4,971	2,489	2,631	5,120	2,578	2,783	5,361
\$6 or under \$7	6,976	919	7,895	5,995	1,182	7,177	5,717	1,331	7,048
\$7 or under \$8	10,396	630	10,926	9,975	577	10,552	8,319	653	8,972
\$8 or under \$9	11,093	274	11,367	12,053	291	12,344	10,454	346	10,800
\$9 or under \$10	15,352	214	15,566	15,983	237	16,220	18,031	299	18,330
\$10 or under \$12	11,285	135	11,420	12,079	142	12,221	13,146	181	13,327
\$12 or under \$15	9,982	33	10,015	10,021	35	10,056	10,966	116	11,082
\$15 or under \$20	6,665	3	6,668	8,910	2	8,912	6,759	30	6,789
\$20 or over	1,857	3	1,860	2,030	1	2,031	2,113	2	2,115
Total	83,236	13,601	96,837	83,737	13,713	97,450	84,959	14,799	99,758

SWEATING IN THE GARMENT-MAKING TRADES, ETC.—This part of the report deals with conditions in the garment-making industries of Milwaukee. The part opens with a general discussion of the sweating system, explains the conditions to which the term “sweating” is applied, and gives a short review of its history. There is also a discussion of the housing problem in which some of the evils of bad housing are set forth and possible remedies presented. Conditions of employment and earnings in Milwaukee, as based upon these investigations, are fully set forth and analyzed. The following statement shows by occupations and classified weekly earnings the number of employees of each sex in the garment-making industry, during the last weeks of 1900 and the first weeks of 1901:

EMPLOYEES OF EACH SEX IN THE GARMENT-MAKING INDUSTRY, BY OCCUPATIONS AND CLASSIFIED WEEKLY EARNINGS.

Occupation and classified weekly earnings.	Males.	Females.	Total.
COAT AND PANTS MAKERS.			
\$9 or over	125	1	126
\$7 or under \$9	158	19	177
\$6 or under \$7	165	49	214
Under \$6	7	619	526
VEST AND CLOAK MAKERS.			
\$9 or over	13	—	13
\$7 or under \$9	15	2	17
\$6 or under \$7	15	3	18
Under \$6	—	73	73
SHIRT, OVERALLS, AND JACKET MAKERS.			
\$9 or over	3	1	4
\$7 or under \$9	3	1	4
\$6 or under \$7	4	20	24
Under \$6	1	80	81

Of 79 shops inspected, 26 were located in one-story frame buildings, 13 in one-story frame with basement, 33 in two-story frame buildings, and the remaining 7 in a better class of buildings.

A brief history is given of the National Consumers' League, organized on May 1, 1899, the first and great specific task of which is to aid in the abolishment of the sweat-shop system of manufacture. An account is also given of the operations of the State and local leagues of Wisconsin.

WOMEN EMPLOYED IN FACTORIES.—This is a study, made in 1901, of the conditions under which women are employed in factories and workshops of the State. The material for the study was obtained through personal visits, and is presented both in textual and tabular form.

Of the total of 769 women coming under this inquiry, 549 were born in Wisconsin, 86 in other States of the Union, 98 in Germany, and 36 in other European countries. Weekly earnings were less than \$3 for 64 of the total number, \$3 or under \$4 for 215 of the women, \$4 or under \$5 for 216 of them, \$5 or under \$6 for 115 of them, and \$6 or upward for the remaining 159. The cost of room and board was under \$2 per week for 37 of the women, \$2 or under \$3 for 250, \$3 or under \$4 for 167, and \$4 or over for 43, the remainder not reporting. Out of the total, 143 reported that they were able to save something out of their earnings and the remainder that they were not able to save anything.

FREE EMPLOYMENT OFFICES.—This part of the report deals with the work of the free employment offices in Milwaukee and Superior, which were established under the provisions of the law of 1901. There is a brief review of the work of such offices in other countries and in other States of this country. Then follows an account of the work of the offices in the above-mentioned cities during the first year of their existence, showing number of applications filed, positions filled, etc.

During the year ending June 28, 1902, the Milwaukee office reported that the male applicants for employment numbered 3,936, that the applicants for help numbered 3,424, and that 2,674 positions were filled, while the female applicants for employment numbered 673, the applicants for help 866, and 511 positions were filled. During the same period the Superior office reported 4,077 male applicants for employment, 4,257 applicants for help, and 3,916 positions filled, while the female applicants for employment were 316, the applicants for help 504, and the positions filled 279.

LABOR ORGANIZATIONS.—A historical review of labor organizations introduces this part of the report. In 1901 75 organizations in the State reported a membership of 5,330. The hours of labor per day

and the average wages per hour were reported for 5,001 members as follows:

HOUS OF WORK PER DAY AND AVERAGE WAGES PER HOUR OF MEMBERS OF LABOR ORGANIZATIONS, 1901.

Hours of work per day.	Number of members.	Per cent of whole number.	Average wages per hour.
8.....	1,406	28.11	\$0.264
9.....	727	14.54	.234
10.....	2,052	41.03	.223
11.....	61	1.22	.274
12.....	52	1.04	.184
5 to 12.....	58	1.16	.254
8 to 13.....	645	12.90	.27

RECENT FOREIGN STATISTICAL PUBLICATIONS.

AUSTRIA.

Die Arbeitseinstellungen und Aussperrungen in Österreich während des Jahres 1901. Herausgegeben vom k. k. Arbeitsstatistischen Amte im Handelsministerium. 382 pp.

This volume contains the eighth annual report of the Austrian Government on strikes and lockouts. The information, which is compiled by the Austrian labor bureau, is given in the form of an analysis and seven tables showing (1) strikes according to geographical distribution, (2) strikes according to industries, (3) general summary of strikes, (4) comparative summary of strikes for each of the years 1894 to 1901, (5) summary of strikes for all the years 1894 to 1901, (6) details for each strike in 1901, (7) details for each lockout in 1901. An appendix gives a brief review of industrial and labor conditions in the leading countries of the world, statistics of trade associations in Austria, a copy of the by-laws of the Society for the Insurance of Employers against Strikes, and notes concerning the strikes reported in the preceding pages.

STRIKES IN 1901.—While the number of strikes in 1901 was slightly above the average in Austria, there were fewer strikers and establishments affected than in any year since complete strike statistics have been compiled. There were but 157,744 days lost in 1901 on account of strikes, which is about one-half the lowest number previously reported for any year.

During the year there were 270 strikes, which affected 719 establishments, and involved 24,870 strikers and 2,846 other employees who were thrown out of employment on account of strikes. The strikers represented 38.47 per cent of the total number of employees in the establishments affected. The average number of strikers in each strike was 92. Of the total strikers, 84.66 per cent were males and 15.34 per cent were females. After the strikes 23,054 strikers were reemployed and 771 new employees took places formerly occupied by strikers. Of the 270 strikes, 56, or 20.74 per cent, were successful;

98, or 36.30 per cent, were partly successful, and 116, or 42.96 per cent, resulted in failure.

The following table shows, by industries, the number of strikes, establishments affected, strikers and others thrown out of employment, etc., during the year 1901:

STRIKES, BY INDUSTRIES, 1901.

Industries.	Strikes.	Estab- lish- ments.	Total employ- ees.	Strikers.		Others thrown out of employ- ment.	Strikers reem- ployed.	New em- ployees after strikes.
				Num- ber.	Percent of total employ- ees.			
Mining.....	40	45	19,906	7,496	37.66	345	7,347	64
Stone, glass, china, and earthen ware.....	29	68	2,987	1,698	56.85	90	1,519	48
Metals and metallic goods..	22	43	2,856	1,393	47.12	352	1,180	66
Machinery and instruments..	15	15	15,208	889	5.85	195	859	17
Wooden and caoutchouc goods.....	27	49	3,261	2,925	89.70	78	2,760	98
Leather, hides, brushes, and feathers.....	8	8	229	202	88.21	10	126	29
Textiles.....	28	29	7,637	2,675	35.03	1,357	2,261	87
Wearing apparel and milli- nery.....	28	309	3,045	1,821	59.80	53	1,591	112
Paper.....	8	8	2,014	683	33.85	44	665	7
Food products.....	13	65	559	336	60.11	14	202	120
Hotels, restaurants, etc.....	1	1	9	8	88.89	1	.....	8
Chemical products.....	5	5	626	314	50.16	21	311	3
Building trades.....	24	24	4,418	3,214	72.75	270	3,114	10
Printing and publishing.....	11	14	552	376	68.12	11	369	8
Heat, power, and lighting plants.....	3	3	322	274	85.09	10	252	38
Commerce.....	3	3	167	64	38.32	.....	61	.....
Transportation.....	3	28	365	365	100.00	.....	366	.....
Other industries.....	2	2	387	137	35.40	.....	72	60
Total.....	270	719	64,652	24,870	38.47	2,846	23,054	771

The mining industry had the largest number of strikes and strikers in 1901. Next in importance with regard to the number of strikers involved were the groups of building trades and wooden and caoutchouc goods. Over one-half of all the strikers in 1901 were engaged in these three groups of industries.

In the presentation of strikes by causes, the cause and not the strike is taken as the unit, and since several causes frequently operate to bring about one strike, the number of causes usually exceeds the number of strikes. Thus, the 270 strikes of 1901 were produced by 313 causes.

The following table shows the causes of the strikes for 1901, by industries:

CAUSES OF STRIKES, BY INDUSTRIES, 1901.

Industries.	Against reduction of wages.	For increase of wages.	For change in method of payment.	For reduction of hours.	For discharge of foremen, workmen, etc.	Against obnoxious treatment.	Against discharge of employees.	Against obnoxious rules.	Other causes.	Total.
Mining.....	2	16	1	3	3	2	6	1	10	44
Stone, glass, china, and earthen ware.....	2	16	3	5	1	.....	3	1	1	32
Metals and metallic goods.....	7	3	1	3	2	1	3	2	1	23
Machinery and instruments.....	1	8	.....	.....	4	.....	1	.....	1	15
Wooden and caoutchouc goods.....	4	11	1	5	2	.....	3	1	5	32
Leather, hides, brushes, and feathers.....	.....	.....	.....	2	1	.....	2	1	1	11
Textiles.....	3	15	1	2	3	.....	1	1	4	30
Wearing apparel and millinery.....	6	11	.....	8	3	.....	5	1	3	37
Paper.....	3	3	.....	2	.....	.....	1	1	.....	10
Food products.....	.....	7	.....	8	.....	.....	3	1	2	21
Hotels, restaurants, etc.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Chemical products.....	.....	2	.....	.....	1	.....	2	.....	.....	5
Building trades.....	.....	16	.....	7	.....	.....	2	1	2	28
Printing and publishing.....	.....	.....	.....	.....	4	1	2	4	.....	11
Heat, power, and lighting plants.....	.....	1	.....	1	2	.....	.....	.....	.....	4
Commerce.....	.....	.....	.....	.....	1	.....	1	.....	2	4
Transportation.....	.....	3	.....	.....	.....	.....	.....	.....	.....	3
Other industries.....	.....	.....	.....	.....	1	.....	.....	.....	1	2
Total.....	28	116	7	46	28	4	36	15	83	313

As in previous years, the most frequent causes of strikes were the demands for increased wages and for reduction of hours, the former having been one of the causes of 37.06 per cent and the latter of 14.70 per cent of all the strikes.

The following table shows the results of strikes, by industries:

RESULTS OF STRIKES, BY INDUSTRIES, 1901.

Industries.	Strikes.				Strikers.			
	Succeeded.	Succeeded partly.	Failed.	Total.	Succeeded.	Succeeded partly.	Failed.	Total.
Mining.....	3	13	24	40	554	3,458	3,484	7,496
Stone, glass, china, and earthen ware.....	7	12	10	29	308	1,186	204	1,698
Metals and metallic goods.....	6	6	10	22	692	257	444	1,393
Machinery and instruments.....	2	5	8	15	192	272	425	889
Wooden and caoutchouc goods.....	8	13	6	27	948	1,661	316	2,925
Leather, hides, brushes, and feathers.....	1	5	2	8	40	120	42	202
Textiles.....	4	10	14	28	391	1,066	1,218	2,675
Wearing apparel and millinery.....	6	16	6	28	190	1,533	108	1,821
Paper.....	2	2	4	8	16	162	505	683
Food products.....	.....	4	9	13	.....	235	101	336
Hotels, restaurants, etc.....	.....	.....	1	1	.....	.....	8	8
Chemical products.....	.....	3	2	5	.....	244	70	814
Building trades.....	6	7	11	24	1,117	1,416	681	3,214
Printing and publishing.....	8	.....	3	11	306	.....	70	376
Heat, power, and lighting plants.....	1	.....	2	3	178	.....	96	274
Commerce.....	1	.....	2	3	5	.....	59	64
Transportation.....	1	2	.....	3	80	285	.....	365
Other industries.....	.....	.....	2	2	.....	.....	187	137
Total.....	56	98	116	270	5,007	11,895	7,968	21,870

Of the total number of strikes in 1901, 20.74 per cent succeeded, 36.30 per cent succeeded partly, and 42.96 per cent failed. Of the total number of strikers 20.13 per cent were engaged in strikes which succeeded, 47.83 per cent in strikes which succeeded partly, and 32.04 per cent in strikes which failed.

The following table shows the results of the strikes in 1901, according to their duration:

RESULTS OF STRIKES, BY DURATION, 1901.

Days of duration.	Strikes.				Strikers.			
	Succeeded.	Succeeded partly.	Failed.	Total.	Succeeded.	Succeeded partly.	Failed.	Total.
1 to 5.....	87	46	77	160	3,919	4,802	6,030	14,751
6 to 10.....	9	21	14	44	620	2,703	645	3,968
11 to 15.....	6	7	10	23	284	1,266	549	2,099
16 to 20.....	.....	4	4	8	.....	282	86	368
21 to 25.....	1	5	5	11	7	848	220	675
26 to 30.....	.....	6	2	7	.....	160	284	444
31 to 35.....	2	3	1	6	165	386	75	1,176
36 to 40.....	.....	2	1	3	.....	940	19	959
41 to 50.....	1	2	.....	3	12	232	.....	304
51 to 100.....	.....	3	2	5	.....	166	60	226
101 or over.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	56	98	116	270	5,007	11,895	7,968	24,870

STRIKES DURING EIGHT YEARS.—The following table shows the number and extent of the strikes in Austria for the period during which the ministry of commerce has published reports on strikes:

STRIKES, BY YEARS, 1894 TO 1901.

Year.	Strikes.	Establishments affected.	Strikers.	Per cent of strikers of total employees.	Days lost.
1894.....	172	2,542	67,061	69.47	795,416
1895.....	209	874	28,652	59.68	300,348
1896.....	305	1,499	66,234	65.72	899,939
1897.....	246	851	38,467	59.08	368,098
1898.....	255	885	39,658	59.86	323,619
1899.....	311	1,330	54,763	60.23	1,029,937
1900.....	303	1,003	105,128	67.29	3,483,963
1901.....	270	719	24,870	38.47	157,744

The number of strikes and the number of strikers for each year of the eight-year period are shown, by industries, in the following two tables:

STRIKES, BY INDUSTRIES, 1894 TO 1901.

Year.	Mining.	Stone, glass, china, and earthen ware.	Metals and metallic goods.	Machinery and instruments.	Wooden and casot-chouc goods.	Textiles.	Building trades.	Other.	Total.
1894.....	13	22	23	7	23	34	11	39	172
1895.....	4	29	37	6	38	29	24	42	209
1896.....	11	29	33	14	55	43	42	78	305
1897.....	25	27	26	20	27	28	34	59	246
1898.....	29	27	26	13	28	28	49	55	255
1899.....	26	21	32	24	35	84	33	56	311
1900.....	40	19	26	18	34	56	23	92	303
1901.....	40	29	22	15	27	28	24	85	270
Total.....	188	208	225	112	267	330	240	506	2,071

STRIKERS, BY INDUSTRIES, 1894 TO 1901.

Year.	Mining.	Stone, glass, china, and earthen ware.	Metals and metallic goods.	Machinery and instruments.	Wooden and caoutchouc goods.	Textiles.	Building trades.	Other.	Total.
1894.....	22,986	6,415	2,762	194	9,793	6,317	14,975	3,629	67,061
1895.....	626	9,943	3,694	253	2,336	4,085	5,361	2,354	28,652
1896.....	30,120	3,217	2,973	2,058	5,972	9,791	5,434	6,669	66,234
1897.....	3,632	3,053	1,568	4,689	1,372	11,275	4,995	7,883	38,467
1898.....	7,046	4,491	991	2,471	1,318	3,171	13,961	6,209	39,658
1899.....	3,477	2,112	2,459	1,856	3,198	30,249	7,842	4,070	54,763
1900.....	78,791	574	1,977	519	1,391	12,010	4,849	5,017	105,128
1901.....	7,496	1,698	1,393	889	2,925	2,675	3,214	4,580	24,870
Total..	154,174	31,503	17,807	12,429	28,305	79,573	60,631	40,411	424,833

The causes of strikes for the eight-year period are shown in the following table, the cause and not the strike being made the unit:

CAUSES OF STRIKES, 1894 TO 1901.

Year.	Against reduction of wages.	For increase of wages.	For change in method of payment.	For reduction of hours.	For discharge of foremen, workmen, etc.	Against obnoxious treatment.	Against discharge of employees.	Against obnoxious rules.	Other causes.	Total.
1894.....	23	53	5	19	12	5	34	16	32	199
1895.....	19	89	6	31	22	2	31	8	37	245
1896.....	28	140	8	67	32	5	40	12	34	366
1897.....	26	116	7	47	26	13	32	18	45	330
1898.....	33	124	8	54	29	9	36	20	89	352
1899.....	29	143	5	73	17	5	40	18	40	370
1900.....	26	152	6	69	13	10	36	14	53	379
1901.....	28	116	7	46	28	4	36	15	33	313
Total..	212	933	52	406	179	53	285	121	313	2,564

The following table shows, for both strikes and strikers, during each year of the period, the results expressed in percentages:

RESULTS OF STRIKES, 1894 TO 1901.

Year.	Strikes.				Strikers.			
	Number.	Per cent succeeded.	Per cent succeeded partly.	Per cent failed.	Number.	Per cent succeeded.	Per cent succeeded partly.	Per cent failed.
1894.....	172	25.00	27.91	47.09	67,061	9.15	37.31	53.54
1895.....	209	26.79	24.84	48.33	28,652	12.81	60.69	26.50
1896.....	305	20.98	36.40	42.62	66,234	4.60	62.80	32.60
1897.....	246	17.48	36.99	45.53	38,467	15.69	47.81	36.50
1898.....	255	18.82	41.18	40.00	39,658	8.36	66.46	25.18
1899.....	311	15.43	45.02	39.55	54,763	10.21	71.99	17.80
1900.....	303	20.13	44.89	34.98	105,128	4.65	85.54	9.81
1901.....	270	20.74	36.30	42.96	24,870	20.13	47.83	32.04
Total.....	2,071	20.23	37.71	42.06	424,833	8.87	63.55	27.58

LOCKOUTS.—There were but 3 lockouts reported in 1901, 2 being due to the observance of Labor Day (May 1) and 1 to the refusal of the

employees to work overtime. The following table contains statistics of lockouts for the period 1894 to 1901:

LOCKOUTS, BY YEARS, 1894 TO 1901.

Year	Lockouts.	Establishments involved.	Persons locked out.	Per cent of persons locked out of total employees.	Persons locked out and reemployed.
1894.....					
1895.....	8	17	2,317	51.25	2,188
1896.....	10	211	5,445	79.82	4,589
1897.....	11	12	1,712	54.40	1,647
1898.....					
1899.....	5	38	3,457	80.96	3,448
1900.....	10	58	4,086	75.81	3,708
1901.....	3	3	302	70.40	302

BELGIUM.

Statistique des Grèves en Belgique, 1896-1900. Office du Travail, Ministère de l'Industrie et du Travail. 1903. lxix, 213 pp.

Since 1896 the Belgian labor bureau has published in its monthly bulletin, *Revue du Travail*, statistics of strikes and lockouts in Belgium as they occurred from month to month. These statistics for the years 1896 to 1900 have been compiled and summarized, and appear in the present report. The report consists of an analysis, statistical tables giving the details for each strike that occurred during the period, and summary tables.

During the five-year period from 1896 to 1900 there were 610 strikes reported, affecting 1,519 establishments and 162,637 strikers. In addition to the strikers, 32,473 other persons were thrown out of work on account of 598 strikes, the number not being reported in the case of 12 strikes. The smallest number of strikes and strikers occurred in 1898, but the following year, 1899, shows the largest number of strikers during the period. The following table shows the number of strikes and strikers each year from 1896 to 1900, by results:

STRIKES, BY YEARS AND RESULTS, 1896 TO 1900.

Year.	Total strikes.	Strikes which—				Total strikers.	Strikers in strikes which—			
		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.
1896.....	139	28	21	86	4	23,204	1,591	1,372	19,912	329
1897.....	130	20	18	85	7	35,958	1,960	4,390	28,574	1,224
1898.....	91	13	10	68	.....	13,101	2,379	1,065	9,657	.....
1899.....	104	33	12	58	1	57,931	5,081	981	51,809	60
1900.....	146	21	29	89	7	32,443	5,449	4,973	20,412	1,009
Total.	610	115	90	356	19	162,637	16,460	12,781	130,164	3,232

It will be observed that during each year the greater number of strikes failed. The percentage of failure is even greater with regard to the number of strikers. Thus, for the whole period, 18.85 per cent of the strikes succeeded, 14.75 per cent succeeded partly, and 63.28 per cent failed, the result not being reported in the case of 19, or 3.12 per cent, of the strikes. Of the strikers 10.12 per cent participated in strikes which succeeded, 7.86 per cent in strikes which succeeded partly, 80.03 per cent in strikes which failed, and 1.99 per cent in strikes the results of which were not reported.

The following table shows the number of strikes and strikers, by results and by industry groups:

STRIKES, BY GROUPS OF INDUSTRIES AND RESULTS, 1896 TO 1900.

Industries.	Total strikes.	Strikes which—				Total strikers.	Strikers in strikes which—			
		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.
Mining	143	5	18	116	4	96,503	881	3,399	91,149	1,074
Quarrying	26	1	7	17	1	4,563	330	1,071	3,127	35
Metals	76	11	7	52	6	11,157	2,287	1,808	5,361	1,701
Ceramics	13	6	2	5	.....	3,162	1,270	935	957	.....
Glass	7	.....	2	5	.....	973	.....	201	772	.....
Chemicals	31	9	3	19	.....	4,077	2,315	229	1,533	.....
Food products	10	2	1	7	.....	628	131	88	409	.....
Textiles	142	22	28	89	3	25,580	3,080	3,332	18,893	275
Building and construction work	27	8	6	12	1	3,203	830	168	2,165	40
Wood and furniture	27	14	4	8	1	3,280	1,118	177	1,920	65
Hides and leather	27	5	2	19	1	1,183	293	67	816	7
Tobacco	16	4	1	10	1	703	291	18	369	25
Paper	1	.....	.....	1	.....	80	.....	.....	30	.....
Printing and publishing	15	8	2	4	1	2,627	2,012	39	566	10
Art and instruments of precision	9	3	1	5	.....	2,226	201	850	1,175	.....
Transportation	18	10	2	6	.....	949	687	117	145	.....
Other industries	22	7	4	11	.....	1,793	734	282	777	.....
Total	610	115	90	386	19	162,637	16,460	12,781	130,164	3,232

The largest number of strikes occurred in the mining industry. Of these 3.49 per cent succeeded, 12.59 per cent succeeded partly, and 81.12 per cent failed, the result not being known in 2.80 per cent of the mine strikes. Of the total number of strikers reported during the five years 96,503, or 59.34 per cent, were in the mining industry. Of these strikers 0.92 per cent were engaged in strikes which succeeded, 3.52 per cent in strikes which succeeded partly, 94.45 per cent in strikes which failed, and 1.11 per cent in strikes the results of which were not known. The textile industry was next in importance, both with regard to the number of strikes and of strikers involved. In this industry, likewise, a large proportion of the strikes were failures.

The next table shows the number of strikes by industries and years:

STRIKES, BY GROUPS OF INDUSTRIES AND YEARS, 1896 TO 1900.

Industries.	Strikes.					Strikers.				
	1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Mining.....	35	51	15	14	28	10,454	27,571	5,970	45,657	6,851
Quarrying.....	3	3	8	4	8	340	405	459	2,307	1,052
Metals.....	11	11	20	12	22	2,340	1,989	1,315	1,111	4,402
Ceramics.....	5	2	4	2	.....	399	935	935	893	.....
Glass.....	1	.....	.....	1	5	56	.....	.....	145	772
Chemicals.....	1	7	7	6	10	70	660	672	1,554	1,121
Food products.....	1	.....	1	4	4	4	.....	204	276	144
Textiles.....	42	23	16	29	32	6,218	1,901	1,137	2,561	13,763
Building and construction work.....	8	6	4	4	5	555	125	1,454	429	640
Wood and furniture.....	7	7	4	2	7	1,763	637	110	832	438
Hides and leather.....	10	3	1	5	8	456	127	4	280	316
Tobacco.....	2	7	2	3	2	73	405	87	145	43
Paper.....	.....	1	.....	.....	.....	30	.....	.....	.....	.....
Printing and publishing.....	3	2	3	3	4	97	16	588	550	1,376
Art and instruments of precision.....	1	2	.....	3	3	11	858	.....	201	1,156
Transportation.....	3	2	2	9	2	64	44	130	543	168
Other industries.....	6	3	4	3	6	304	255	86	947	201
Total.....	139	130	91	104	146	23,204	35,958	13,101	57,931	32,443

The causes which figured most frequently in strikes during the period were disputes concerning wages, hours of labor, working conditions, and demands for the reinstatement or for the discharge of employees, nearly nine-tenths of all the strikes being due to these causes. The following table shows the causes of strikes and their results for the five-year period 1896 to 1900:

STRIKES, BY CAUSES AND RESULTS, 1896 TO 1900.

Cause or object.	Total strikes.	Strikes which—				Total strikers.	Strikers in strikes which—			
		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.
For increase of wages.....	298	68	50	171	9	97,669	11,108	7,076	76,797	2,688
Against reduction of wages.....	30	5	8	17	.....	3,607	732	711	2,164	.....
Other causes affecting wages.....	28	8	4	15	1	2,144	584	171	1,219	170
For reduction of hours.....	11	.....	2	8	1	3,778	.....	929	2,842	7
Other causes affecting hours of labor.....	5	1	.....	4	.....	314	25	.....	289	.....
For or against modification of conditions of work.....	55	8	7	37	3	9,234	721	639	7,685	189
Against piecework.....	6	.....	1	5	.....	2,992	.....	88	2,904	.....
Against employment of females.....	3	.....	.....	3	.....	132	.....	.....	132	.....
For or against modification of shop rules.....	18	5	2	11	.....	24,719	1,351	175	23,193	.....
Against fines.....	9	1	1	7	.....	1,957	400	451	1,106	.....
For discharge of superintendents or other employees.....	46	10	1	34	1	5,460	964	150	4,321	25
For reinstatement of discharged employees.....	71	7	7	55	2	7,748	509	1,052	6,077	110
Trade unionism.....	11	3	1	6	1	502	66	90	312	34
Other causes.....	19	.....	6	12	1	2,381	.....	1,249	1,123	9
Total.....	610	115	90	386	19	162,637	16,460	12,781	130,164	3,232

*The sum of the items does not agree with the total; the figures, however, are reproduced as they are in the original.

In the next table the strikes are shown by causes and years:

STRIKES, BY CAUSES AND YEARS, 1896 TO 1900.

Cause or object.	Strikes.					Strikers.				
	1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
For increase of wages	66	55	43	50	84	7,147	8,441	5,438	50,549	26,094
Against reduction of wages	9	7	5	6	3	1,581	780	561	565	120
Other causes affecting wages	5	7	3	8	5	464	196	91	1,150	243
For reduction of hours	1	4	.....	1	5	189	1,155	.....	58	2,376
Other causes affecting hours of labor	3	.....	1	1	.....	260	.....	42	12	.....
For or against modification of conditions of work	15	12	4	10	14	4,338	1,341	219	2,527	809
Against piecework	3	2	.....	1	.....	2,676	228	.....	88	.....
Against employment of females	1	.....	.....	1	1	10	.....	.....	60	62
For or against modification of shop rules	1	10	4	1	2	85	20,185	3,987	302	160
Against fines	2	3	1	1	2	812	901	70	63	111
For discharge of superintendents or other employees	13	8	10	11	4	2,306	509	473	1,580	592
For reinstatement of discharged employees	17	17	16	8	13	3,171	1,466	1,711	812	588
Trade unionism .....	.....	.....	1	3	7	.....	.....	90	68	344
Other causes	3	5	3	2	6	165	756	419	97	944
Total	139	130	91	104	146	23,204	35,958	13,101	57,931	32,443

The strikes during the period were mostly of short duration, 325 of 573 strikes for which duration was reported having lasted 5 days or less, and but 44 over 30 days. Of the latter, 7 lasted longer than 100 days.

The strikes were mostly small, 398, or nearly two-thirds of the total number, having involved 100 strikers or less each. Nineteen strikes involved over 1,000 persons each. Thirty-eight per cent of all the strikers during the 5-year period were engaged in two mine strikes—one, in 1897, involving 18,946 strikers, and the other, in 1899, involving 42,842 strikers.

The following table shows the strikes during the period according to method of settlement and results:

STRIKES, BY METHOD OF SETTLEMENT AND RESULTS, 1896 TO 1900.

Method of settlement.	Total strikes.	Strikes which—				Total strikers.	Strikers in strikes which—			
		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.		Succeeded.	Succeeded partly.	Failed.	Remained indefinite or unsettled.
Direct negotiation between the parties	505	81	73	339	12	68,113	7,063	10,850	49,112	1,088
Negotiation between one party and a trade association	38	14	6	16	2	7,825	1,892	572	4,808	553
Negotiation between an employers' and an employees' trade association	11	6	2	3	.....	10,914	3,481	95	7,338	.....
Intervention of councils of industry and labor	16	6	4	6	.....	2,721	1,872	239	610	.....
Arbitration	2	1	.....	1	.....	100	90	.....	10	.....
Conciliation	10	5	2	3	.....	2,177	1,816	112	249	.....
Method not reported	28	2	3	18	5	70,687	146	513	68,037	1,591
Total	610	115	90	386	19	162,637	16,460	12,781	130,164	3,232

a The sum of the items does not agree with the total; the figures, however, are reproduced as they appear in the original.

Eighty-three per cent of the strikes were settled by direct negotiation between the parties, the strikes resulting mostly in failure. Those settled in other ways were mostly either successful or partly successful. The next table shows the method of settlement of strikes for each year:

STRIKES, BY METHOD OF SETTLEMENT AND YEARS, 1896 TO 1900.

Method of settlement.	Strikes.					Strikers.				
	1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Direct negotiation between the parties.....	111	115	75	87	117	15,982	14,643	8,903	9,117	19,468
Negotiation between one party and a trade association.....	14	5	8	5	6	2,445	888	805	215	3,472
Negotiation between an employers' and an employees' trade association.....	2	1	2	2	4	2,417	151	1,443	990	5,913
Intervention of councils of industry and labor.....	4	2	5	4	1	418	351	615	1,237	100
Arbitration.....	1	.....	.....	1	.....	90	.....	.....	10	.....
Conciliation.....	3	2	.....	1	4	87	149	.....	500	1,441
Method not reported.....	4	5	1	4	14	1,765	19,776	1,335	45,762	2,049
Total.....	139	130	91	104	146	23,204	35,958	13,101	57,931	32,443

^a The sum of the items does not agree with the total; the figures, however, are reproduced as they appear in the original.

FRANCE.

Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage Survenus Pendant l'Année 1902. Direction du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. xvi, 482 pp.

This is the twelfth of a series of annual reports on strikes and conciliation and arbitration issued by the French labor bureau. The information is presented in the same form as that contained in previous reports.

STRIKES.—During the year 1902 there were 512 strikes, involving 1,820 establishments, 212,704 strikers, and 9,461 persons thrown out of work on account of strikes. Of the strikers, 162,622 were men, 35,326 were women, and 14,756 were children. The strikes caused a total loss of 4,472,477 working days by strikers and 202,604 by other employees thrown out of work, or a total of 4,675,081 working days. In 1901 there were 523 strikes, in which 111,414 strikers were involved and 10,147 other employees were affected, causing an aggregate loss of 1,862,050 working days. The large number of strikers and days lost in 1902 is due to a general strike of miners in that year, which alone involved 115,240 strikers and caused a loss of 3,210,957 working days. The average number of days lost per striker in 1902 was 22.

Of the 512 strikes during 1902, 417 involved but 1 establishment each, 33 involved from 2 to 5 establishments, 23 from 6 to 10 establishments, 27 from 11 to 25 establishments, 9 from 26 to 50 establishments, and 1 from 51 to 100 establishments. Of the 2 remaining strikes, 1 involved 115 and the other 133 establishments. The latter was the miners' strike above mentioned.

In 304 strikes all or a part of the striking employees were organized. The employers were organized in 184 strikes. Nine workingmen's unions and 1 employers' association were organized during the progress of or immediately following strikes. In 31 strikes regular aid was given by labor organizations to their striking members.

Of the 512 strikes, 111, involving 23,533 strikers, succeeded; 184 strikes, involving 160,820 strikers, succeeded partly, and 217 strikes, involving 28,351 strikers, failed.

The two tables following show, by groups of industries, the number of strikes, strikers, and establishments involved, according to the results of strikes; also the days of work lost by all employees and the number of strikers per 1,000 working people in each group of industries:

STRIKES AND ESTABLISHMENTS INVOLVED, BY GROUPS OF INDUSTRIES, 1902.

Industries.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
Agriculture, forestry, and fish-eries	2	4			3	3	5	7
Mining				139	8	8	15	147
Quarrying			2	11	1	1	3	12
Food products	3	9	1	1	5	21	9	31
Chemical industries	6	31	6	6	8	37	20	74
Paper and printing	3	3	1	1	10	10	14	14
Hides and leather	10	34	10	54	9	12	29	100
Textiles	43	61	68	113	66	146	167	320
Clothing, cleaning, etc.	3	3	5	28	4	4	12	35
Wood working	8	30	7	21	8	10	23	61
Building (woodwork)			4	63	4	6	8	69
Metal refining	1	1	3	3	9	9	13	13
Metal working	5	5	32	114	35	69	72	188
Precious metal work	1	1	1	1	1	1	3	3
Stone, earthenware, glass, etc.	5	5	6	27	7	44	18	76
Building (stone, tile, excavat-ing, roofing, etc., work)	13	39	31	243	19	58	63	340
Transportation and handling	8	25	10	138	20	167	38	330
Total	111	251	184	963	217	606	512	1,820

STRIKERS AND DAYS OF WORK LOST BY ALL EMPLOYEES THROWN OUT OF WORK BY STRIKES IN 1902, BY INDUSTRIES.

Industries.	Strikers in strikes which—			Total strikers.	Strikers per 1,000 working people in each industry. (a)	Days of work lost by all employees thrown out of work.
	Succeeded.	Succeeded partly.	Failed.			
Agriculture, forestry, and fisheries	132		211	343	0.10	2,179
Mining		118,605	404	119,009	764.93	3,274,407
Quarrying		146	26	172	3.09	6,239
Food products	410	26	572	1,008	3.66	4,940
Chemical industries	15,707	947	1,598	18,252	172.03	124,680
Paper and printing	123	17	299	439	3.63	7,101
Hides and leather	1,025	1,252	355	2,632	15.57	114,860
Textiles	3,413	18,988	12,292	34,693	54.42	502,771
Clothing, cleaning, etc.	195	822	226	1,243	2.85	32,818
Wood working	477	402	336	1,215	5.40	23,646
Building (woodwork)		278	80	358	(b)	6,910
Metal refining	43	209	2,583	2,835	50.88	64,904
Metal working	112	5,439	1,429	6,980	16.77	125,681
Precious metal work	24	4	9	37	1.81	366
Stone, earthenware, glass, etc.	467	5,463	382	6,312	43.36	239,400
Building (stone, tile, excavating, roofing, etc., work)	760	3,408	813	4,981	<10.26	34,102
Transportation and handling	645	4,814	6,736	12,195	19.52	110,077
Total	23,533	160,820	28,351	212,704	456.14	4,675,081

a Based on the census of 1896.

b Included in building (stone, tile, excavating, roofing, etc., work).

c Including building (woodwork).

d Based on the total number of industrial working people in France.

Of the 17 groups of industries above shown, 3, namely, textiles, metal working, and building (stone, tile, excavating, roofing, etc.), together furnished over one-half of the total number of strikes during the year. With regard to the number of strikers, however, over one-half the total number were in the mining industry. The strikes in this industry involved over 76 per cent of the total mining population of France.

The strike data are shown by causes in the two tables following:

STRIKES, BY CAUSES, 1902.

[A considerable number of strikes were due to two or more causes, and the facts in such cases have been tabulated under each cause; hence the totals for this table necessarily do not agree with those for the preceding tables.]

Cause or object.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
For increase of wages	51	165	97	706	108	306	256	1,177
Against reduction of wages	34	47	25	78	24	25	83	150
For reduction of hours of labor with present or increased wages	18	166	3	47	17	266	38	479
Relating to time and method of payment, etc., of wages	13	62	9	62	14	169	36	298
For or against modification of conditions of work	4	4	14	66	22	138	40	208
Against piecework	3	5	2	2	13	14	18	21
For or against modification of shop rules	8	19	3	23	12	12	23	54
For abolition or reduction of fines	2	2	4	4	9	9	15	15
Against discharge or for reinstatement of workmen, foremen, or directors	12	17	6	6	24	24	42	47
For discharge of workmen, foremen, or directors	9	10	3	3	27	28	39	41
Against employment of women			1	1	3	20	4	21
For limitation of number of apprentices	1	1	2	18	2	2	5	21
Relating to deductions from wages for support of insurance and aid funds	4	22			2	2	6	24
Other causes	14	53	4	4	17	216	35	273

STRIKERS AND DAYS OF WORK LOST BY ALL EMPLOYEES THROWN OUT OF WORK BY STRIKES IN 1902, BY CAUSES.

[A considerable number of strikes were due to two or more causes, and the facts in such cases have been tabulated under each cause; hence the totals for this table necessarily do not agree with those for the preceding tables.]

Cause or object.	Strikers in strikes which—			Total strikers.	Days of work lost by all employees thrown out of work.
	Succeeded.	Succeeded partly.	Failed.		
For increase of wages	5,793	131,327	9,787	146,907	3,695,660
Against reduction of wages	2,454	10,481	1,357	14,292	227,788
For reduction of hours of labor with present or increased wages	1,813	8,040	124,162	134,015	3,545,118
Relating to time and method of payment, etc., of wages	1,554	963	116,185	118,702	3,242,890
For or against modification of conditions of work	221	3,705	7,633	11,559	157,488
Against piecework	142	578	813	1,531	9,492
For or against modification of shop rules	546	5,628	729	6,901	274,232
For abolition or reduction of fines	110	749	791	1,650	4,847
Against discharge or for reinstatement of workmen, foremen, or directors	2,656	389	2,582	5,577	76,608
For discharge of workmen, foremen, or directors	1,752	410	1,999	4,161	42,874
Against employment of women .....	.....	140	141	281	5,981
For limitation of number of apprentices	8	141	44	188	892
Relating to deductions from wages for support of insurance and aid funds	896	.....	90	965	8,454
Other causes	14,725	1,925	117,778	134,429	3,407,476

As in previous years the most frequent causes of strikes were wage disputes, the demands for increased wages and attempts to reduce wages having figured in about one-half of all the strikes that occurred during the year.

The next two tables show, respectively, the results of strikes, by duration, and the duration and results of strikes, by number of strikers involved:

STRIKES AND STRIKERS, BY DURATION OF STRIKES, 1902.

Days of duration.	Strikes.				Strikers.			
	Succeeded.	Succeeded partly.	Failed.	Total.	Succeeded.	Succeeded partly.	Failed.	Total.
7 or under	83	102	128	313	6,745	11,294	6,986	25,025
8 to 15	13	38	46	97	2,291	4,488	5,164	11,943
16 to 30	13	22	18	53	14,300	18,246	7,049	39,595
31 to 100	2	20	21	43	197	11,509	8,500	20,206
101 or over .....	.....	2	4	6	.....	115,283	652	115,985
Total	111	184	217	512	23,583	160,820	28,351	212,704

DURATION AND RESULTS OF STRIKES, BY NUMBER OF STRIKERS INVOLVED, 1902.

Strikers involved.	Strikes.				Days of duration.				
	Succeeded.	Succeeded partly.	Failed.	Total.	7 or under.	8 to 15.	16 to 30.	31 to 100.	101 or over.
25 or under	24	38	78	140	90	25	14	9	2
26 to 50	23	41	51	115	80	18	9	6	2
51 to 100	34	42	46	122	75	23	12	12	.....
101 to 200	20	28	25	73	47	15	6	5	.....
201 to 500	7	19	11	37	17	12	3	5	.....
501 to 1,000	1	5	2	8	2	3	2	.....	1
1,001 or over	2	11	4	17	2	1	7	6	1
Total	111	184	217	512	313	97	58	43	6

Most of the strikes were small and of short duration, 313, or 61 per cent, having lasted seven days or less, and only 49 over thirty days. Fifty per cent of the strikes involved less than 50 persons each. Seventeen strikes involved over 1,000 persons each.

CONCILIATION AND ARBITRATION.—During the year 1902 recourse to the law of December 27, 1892, in regard to the conciliation and arbitration (^a) of labor disputes, was had in 107 disputes. In 4 cases recourse was had to the law before entire cessation of work had occurred, but strikes were subsequently declared in 2 of these cases, leaving 2 instances only where strikes were averted by application of the law. Including these 2 cases the number of disputes in which the application of the law was requested in 1902 is equal to 20.89 per cent of the number of strikes that actually occurred during the year. During the preceding nine-year period such recourse was had in a number of disputes, equal to 24.06 per cent of the total strikes for the period. Requests for the application of the law during 1902 were made by employees in 60 disputes, by employers in 5 disputes, and by employees and employers united in 2 disputes. In the other 40 disputes in which recourse was had to the law, the initiative was taken by justices of the peace.

As for results it was found that 6 strikes had terminated by agreement between employers and employees before committees of conciliation were formed. The offer of conciliation was rejected in 42 of the 101 remaining disputes, the rejection coming from employers in 35 cases, from the employees in 2 cases, and from both employers and employees in 5 cases. In 5 of the 42 cases in which conciliation was rejected the dispute was terminated on the employees withdrawing their demands or accepting concessions previously offered, while in the 37 other cases strikes were declared or continued. Of these 37 strikes none succeeded, 14 succeeded partly, and 23 failed.

Committees of conciliation were constituted for the settlement of the remaining 59 disputes. Thirty-two of these disputes were settled directly by such committees, and of the 27 disputes remaining 9 were settled by arbitration and 2 were settled by the parties themselves, after having appeared without success before committees of conciliation. Strikes were declared or continued after the failure of conciliation and arbitration in the 23 remaining disputes. Of these strikes 3 succeeded, 11 succeeded partly, and 9 failed.

^a For the provisions of this law see Bulletin of the Department of Labor, No. 25, pp. 854-856.

The following is a summary statement in regard to disputes in which recourse was had to the law concerning conciliation and arbitration during 1902, and for the preceeding nine years, taken collectively:

SUMMARY OF CASES IN WHICH RECOURSE WAS HAD TO THE LAW CONCERNING CONCILIATION AND ARBITRATION, 1893 TO 1901 AND 1902.

Items.	1893 to 1901.	1902.
Total number of strikes.....	4,796	512
Disputes in which recourse was had to the law of 1892.....	a 1,154	107
Disputes settled:		
Before the creation of committees of conciliation.....	77	6
After refusal of request for conciliation.....	51	5
Directly by committees of conciliation.....	b 281	32
By arbitration.....	60	2
Directly by the parties after having had recourse to conciliation.....	22	2
Total cases settled through the application of the law.....	478	47
Strikes resulting or continuing:		
After refusal of request for conciliation.....	c 391	37
After failure of recourse to conciliation and arbitration.....	d 280	23
Total cases of failure after application of the law.....	668	60

a Relates to 1,146 disputes. Prior to 1900 the instances in which the application of the law were requested, and not the disputes themselves, were counted.

b There were but 278 disputes settled by committees of conciliation. Three disputes have been counted twice because 2 committees were formed in each case.

c Including 4 disputes that were submitted to committees of conciliation after strike was declared. Hence the figures should be 387; but they are given as found in the report.

d Figures here should be 281; those given are, however, according to the original.

The above summary shows that of 107 disputes considered in 1902, 47 were settled directly or indirectly through the application of the law of 1892, and in the case of 60 the recourse to the law proved fruitless. Of the 47 disputes settled 9 were favorable to the demands of the employees, 30 resulted in a compromise, and 8 were unfavorable to the employees. In the 60 disputes which continued after the failure of attempts at conciliation and arbitration the employees succeeded in 3, succeeded partly in 25, and failed in 32 cases.

GERMANY.

Streiks und Aussperrungen im Jahre 1902. Bearbeitet im Kaiserlichen Statistischen Amt. 300 pp.

This is the fourth annual report on strikes and lockouts published by the German imperial statistical bureau. The report contains analyses and summaries of the strikes and lockouts in 1902, copies of schedules of inquiry, and tables showing in detail, by locality and by industry for each dispute, the duration, establishments affected, total number of employees, strikers, and others thrown out of employment, causes, results, manner of settlement, etc. The data relate to disputes ending in 1902.

During 1902 there were 1,060 strikes reported, affecting 3,437 establishments. Operations were completely suspended in 849 establishments. Of a total of 131,086 employees in the establishments affected 53,912 participated in the strikes, and 6,272 others were thrown out of employment on account of them.

The following table shows the results of the strikes in 1902:

RESULTS OF STRIKES, 1902.

[The column headed "Strikers" shows the maximum number of strikers engaged at any time during strike.]

Result of strikes.	Strikes.	Establishments affected.	Total persons employed in establishments affected.	Strikers.	Others thrown out of work.
Succeeded.....	228	405	19,544	8,529	794
Succeeded partly.....	235	1,929	47,490	22,004	1,904
Failed.....	597	1,108	64,052	28,379	3,634
Total.....	1,060	3,437	131,086	58,912	6,272

Fifty-six per cent of all the strikes in 1902 were complete failures, although the proportion of persons participating in unsuccessful strikes was 43 per cent of the total number of strikers. Only about 16 per cent of the strikers were engaged in successful strikes.

The following table shows, by principal groups of industries, the number and results of strikes, the number of establishments and strikers involved, and the number of other employees thrown out of work on account of strikes during the year 1902:

SUMMARY OF STRIKES, BY GROUPS OF INDUSTRIES, 1902.

[The column headed "Strikers" shows the maximum number of strikers at any time during strike.]

Industries.	Total strikes.	Strikes which—			Establishments.	Strikers.	Other employees thrown out of work.
		Succeeded.	Succeeded partly.	Failed.			
Gardening, florist, and nursery trades.....	1	1	—	—	5	31	—
Mining, smelting, salt, and peat extraction.....	14	1	4	9	16	2,572	254
Stonework and earthenware.....	68	13	20	35	94	2,185	677
Metal work.....	68	14	22	32	258	2,761	445
Machinery, tools, and instruments.....	48	10	9	29	58	2,516	67
Chemicals.....	1	—	—	1	1	16	—
Forestry products, lighting materials, and varnishes.....	2	1	—	1	2	50	—
Textiles.....	101	22	28	51	117	7,509	322
Paper.....	4	—	1	3	8	85	—
Leather.....	20	3	6	11	161	611	1
Wooden ware and carved goods.....	135	20	28	87	218	3,544	74
Food products.....	35	5	7	23	57	1,128	195
Clothing and cleaning.....	60	23	20	17	409	2,070	17
Building trades.....	467	105	85	277	1,997	27,330	4,175
Printing and publishing.....	7	2	—	5	7	279	3
Painting, sculpture, decoration, and artistic work.....	3	1	—	2	3	17	—
Commercial employment.....	9	2	3	4	9	520	—
Transportation.....	16	5	2	9	16	665	30
Other industries.....	1	—	—	1	1	13	—
Total.....	1,060	228	235	597	3,437	58,912	6,272

The group of building trades, as in previous years, had the largest number of strikes, strikers, and establishments affected, over one-half of all the strikers during 1902 being persons engaged in this industry. The building-trades strikes were mostly failures. Next in importance with regard to the number of persons involved are the groups of textiles and of wooden ware and carved goods. Seventy-one per cent of all the strikers belonged to these three groups.

The next two tables show, respectively, the results of strikes according to their duration and according to the number of strikers involved.

SUMMARY OF STRIKES, BY DURATION, 1902.

[The column headed "Strikers" shows the maximum number of strikers at any time during strike.]

Days of duration.	Total strikes.	Strikes which—			Establishments.	Strikers.	Other employees thrown out of work.
		Succeeded.	Succeeded partly.	Failed.			
Less than 1	111	35	11	65	114	3,600	537
1 to 5	391	111	81	199	679	16,921	2,455
6 to 10	172	41	44	87	360	7,693	367
11 to 20	117	28	34	55	482	3,758	477
21 to 30	75	7	22	46	718	6,414	361
31 to 50	101	4	22	75	650	8,522	1,722
51 to 100	65	2	14	49	283	3,778	133
101 or over	28	.....	7	21	251	3,226	220
Total	1,060	228	235	597	3,437	53,912	6,272

SUMMARY OF STRIKES, BY NUMBER OF STRIKERS INVOLVED, 1902.

[The column headed "Strikers" shows the maximum number of strikers at any time during strike.]

Strikers involved.	Total strikes.	Strikes which—			Establishments.	Strikers.	Other employees thrown out of work.
		Succeeded.	Succeeded partly.	Failed.			
2 to 5	102	25	11	66	113	400	167
6 to 10	196	46	25	125	235	1,537	566
11 to 20	241	55	29	157	298	3,719	493
21 to 30	142	31	32	79	206	3,547	1,190
31 to 50	145	29	43	73	399	5,684	586
51 to 100	128	24	49	55	336	9,329	858
101 to 200	66	14	24	28	578	9,273	480
201 to 500	30	4	15	11	515	9,653	854
501 or over	10	.....	7	3	757	10,770	1,078
Total	1,060	228	235	597	3,437	53,912	6,272

The following table shows the causes and results of strikes in 1902, the cause and not the strike being taken as the unit:

STRIKES, BY CAUSES, 1902.

[A considerable number of strikes were due to two or more causes, and the facts in such cases have been tabulated under each cause; hence the totals for this table necessarily do not agree with those for the preceding tables.]

Cause or object.	Total strikes.	Strikes which—		
		Succeeded.	Succeeded partly.	Failed.
Against reduction of wages	131	25	29	77
For increase of wages	582	106	155	271
For extra rate for overtime	33	4	15	14
For extra pay for secondary work	34	5	12	17
Other causes affecting wages	66	16	22	28
Against increase of hours	10	1	1	8
For reduction of hours	160	36	40	84
For abolition or limitation of overtime work	13	1	9	3
For reduction of hours on Saturday	21	1	13	7
For regular hours	9	.....	5	4
Other causes affecting hours of labor	9	1	3	5
For change in method of payment	37	6	8	23
Against change in method of payment	17	2	5	10
For reinstatement of discharged employees	141	20	22	99
For discharge or against employment of certain persons	48	6	3	39
For discharge of foremen, etc.	14	1	3	10
Against being compelled to work on holidays	8	.....	4	4
For better sanitary conditions, etc.	24	6	10	8
Against use of material from establishment in which strike was pending	22	6	.....	16
For better treatment	16	6	4	6
For recognition of committee of employees	34	.....	23	11
For adoption, retention, or change of wage scale	89	23	32	34
Other causes	114	27	44	43

GREAT BRITAIN.

Report on Strikes and Lockouts in the United Kingdom in 1902, and on Conciliation and Arbitration Boards. 1903. 132 pp. (Published by the Labor Department of the British Board of Trade.)

The report on strikes and lockouts in the United Kingdom, prepared by the labor department of the board of trade, is the fifteenth issued since the commencement of the series in 1888. The report shows in detail for each dispute, beginning in 1902, the locality, the number of establishments involved, the number and occupations of working people thrown out of work, the cause or object of the dispute, the date of beginning and ending, and the result; also statements of the work of boards of conciliation and arbitration and of certain agreements and awards terminating trade disputes. The tables giving details are preceded by summary tables, by tables presenting comparative data for the years 1898 to 1902, and by an analysis of the statistics of strikes and lockouts and of conciliation and arbitration. The general method of inquiry and the plan of presentation are the same as for the past few years. Disputes involving fewer than 10 employees (and those which lasted less than one day) have been omitted from the tabulations, except when the aggregate duration exceeded 100 working days.

STRIKES AND LOCKOUTS IN 1902.—The number of labor disputes arising in 1902 was less than in any of the preceding four years (1898 to 1901), but the number of working people directly and indirectly affected was greater than in any of those years. The aggregate days of duration was less than in 1901, but greater than in 1900 and 1899. During 1902 there were 442 strikes and lockouts, involving 116,824 employees directly and 139,843 indirectly, or throwing out of work a total of 256,667 working people and resulting in an aggregate loss of 3,479,255 working days.

The following tables show the number of strikes and lockouts and the number of employees involved in 1902, classified according to the principal causes and the results:

STRIKES AND LOCKOUTS, BY CAUSES AND RESULTS, AND WORKING DAYS LOST, 1902.

[“Aggregate working days lost by all employees thrown out of work” includes the aggregate duration in 1902 of disputes beginning in previous years and excludes the duration in 1903 of disputes beginning in 1902.]

Principal cause or object.	Strikes and lockouts the results of which were—				Total strikes and lockouts.	Aggregate working days lost by all employees thrown out of work.
	In favor of employees.	In favor of employers.	Compromised.	Indefinite or unsettled.		
Wages	53	128	80	6	267	2,673,183
Hours of labor	5	10	5		20	104,101
Employment of particular classes or persons	14	30	13	1	58	169,810
Working arrangements, rules, and discipline	17	23	23	1	64	249,340
Trade unionism	18	8	1	2	29	170,408
Sympathetic disputes		1			1	1,042
Other causes		2	1		3	12,321
Total	107	202	123	10	442	3,479,255

STRIKERS AND EMPLOYEES LOCKED OUT, BY CAUSES AND RESULTS, 1902.

Principal cause or object.	Strikers and employees locked out in disputes the results of which were—				Total strikers and employees locked out.	Other employees thrown out of work.
	In favor of employees.	In favor of employers.	Compromised.	Indefinite or unsettled.		
Wages	5,525	18,749	30,282	2,177	56,733	117,859
Hours of labor	438	2,328	278	.....	3,044	6,840
Employment of particular classes or persons ..	5,523	4,129	1,384	400	11,436	6,243
Working arrangements, rules, and discipline..	3,212	6,967	9,610	60	19,849	8,382
Trade unionism	22,219	8,149	11	110	25,489	1,019
Sympathetic disputes .....	.....	14	.....	.....	14	.....
Other causes .....	.....	179	80	.....	259	.....
Total	36,917	35,515	41,645	2,747	116,824	139,843

As in previous years, the disputes in 1902 related mostly to wages, 267 out of a total of 442 strikes and lockouts, or 60.4 per cent, resulting from this cause. Of the total of 116,824 strikers and employees locked out in disputes from all causes, 56,733, or 48.6 per cent, were involved in wage disputes. Hours of labor was the cause of but 20 disputes, or 4.5 per cent of the total, and directly affected but 3,044 working people. In 29 disputes, or 6.6 per cent of the total, trade unionism was the cause, and directly affected 25,489, or 21.8 per cent, of the working people.

Of the 442 disputes, 107, or 24.2 per cent, resulted in favor of the employees, 202, or 45.7 per cent, in favor of the employers, 123, or 27.8 per cent, were compromised, and 10, or 2.3 per cent, remained indefinite or unsettled. Of the 116,824 strikers and employees locked out, 36,917, or 31.6 per cent, were engaged in disputes which resulted in favor of employees; 35,515, or 30.4 per cent, in disputes which resulted in favor of employers; 41,645, or 35.7 per cent, in disputes which were compromised, and 2,747, or 2.3 per cent, in disputes which remained indefinite or unsettled at the close of the year. Employees involved in disputes relating to wages and hours of labor were mostly unsuccessful, while in disputes relating to trade unionism they were mostly successful.

In 1902, as in previous years, a large proportion of disputes affected comparatively few working people. This is brought out in the following table:

STRIKES AND LOCKOUTS, BY GROUPS OF EMPLOYEES THROWN OUT OF WORK, 1902.

["Aggregate working days lost by all employees thrown out of work" includes the aggregate duration of disputes beginning in 1902 and embraces working days lost in 1903 in disputes extending beyond 1902.]

Groups of employees thrown out of work.	Strikes and lockouts.	Employees thrown out of work.		Aggregate working days lost by all employees thrown out of work.	
		Number.	Per cent.	Number.	Per cent.
5,000 or over	3	119,872	46.7	940,913	26.3
2,500 or under 5,000	4	12,957	5.0	535,926	15.0
1,000 or under 2,500	35	48,568	18.9	842,670	23.6
500 or under 1,000	43	30,405	11.8	263,935	7.4
250 or under 500	61	21,179	8.3	385,501	10.8
100 or under 250	93	14,610	5.7	377,677	10.6
50 or under 100	84	6,050	2.4	154,727	4.3
25 or under 50	68	2,210	.9	58,702	1.5
Under 25	51	816	.3	18,839	.5
Total	442	256,667	100.0	3,573,890	100.0

From the above table it is seen that out of 442 disputes, 203, or 45.9 per cent, involved less than 100 employees each, or only 3.6 per cent of all the employees thrown out of work and 6.3 per cent of the time lost in all the disputes of the year. On the other hand, the 7 largest disputes involved 132,829, or 51.7 per cent, of the employees thrown out of work and 41.3 per cent of the time lost in all the disputes of the year.

The tables following show the extent to which each of the various groups of industries was involved in the strikes and lockouts of 1902, and the results of the dispute in each case:

STRIKES AND LOCKOUTS, BY INDUSTRIES AND RESULTS, AND WORKING DAYS LOST, 1902.

["Aggregate working days lost by all employees thrown out of work" includes the aggregate duration in 1902 of disputes beginning in previous years and excludes the duration in 1903 of disputes beginning in 1902.]

Industries.	Strikes and lockouts the results of which were—				Total strikes and lockouts.	Aggregate working days lost by all employees thrown out of work.
	In favor of employees.	In favor of employers.	Compromised.	Indefinite or unsettled.		
Building trades	20	13	6	.....	39	115,460
Mining and quarrying	40	63	59	6	168	2,550,047
Metal, engineering, and shipbuilding	11	33	25	2	71	430,332
Textile	15	49	17	1	82	228,380
Clothing	10	6	7	.....	23	54,044
Transportation	3	9	2	.....	14	10,627
Miscellaneous	7	26	7	1	41	94,133
Employees of public authorities	1	3	.....	.....	4	6,482
Total	107	202	123	10	442	3,479,365

STRIKERS AND EMPLOYEES LOCKED OUT, BY INDUSTRIES AND RESULTS, 1902.

Industries.	Strikers and employees locked out in disputes the results of which were—				Total strikers and employees locked out.	Other employees thrown out of work.
	In favor of employees.	In favor of employers.	Compromised.	Indefinite or unsettled.		
Building trades	1,936	1,832	1,061		4,829	527
Mining and quarrying	30,212	20,726	32,259	2,320	85,517	123,009
Metal, engineering, and shipbuilding ..	747	3,682	4,835	366	9,630	6,284
Textile	1,858	4,589	2,010	29	8,486	8,220
Clothing	563	1,211	482		2,256	534
Transportation	453	734	148		1,335	255
Miscellaneous	327	1,536	850	32	2,745	934
Employees of public authorities	821	1,205			2,026	80
Total	36,917	35,515	41,645	2,747	116,824	139,843

The mining and quarrying industry shows the largest number of disputes, working people involved, and working days lost. The largest measure of success on the part of employees seems to have been attained by those involved in disputes in the building trades and in the mining and quarrying industry.

STRIKES AND LOCKOUTS DURING FIVE YEARS.—During the 5-year period 1898 to 1902 there was a yearly average of 632.4 disputes, in which there was affected an average of 211,775 working people. The following table presents some of the principal statistics of strikes and lockouts for each year from 1898 to 1902:

STRIKES AND LOCKOUTS, EMPLOYEES THROWN OUT OF WORK, AND WORKING DAYS LOST, 1898 TO 1902.

("Aggregate working days lost by all employees thrown out of work" includes the aggregate duration in each year of disputes beginning in previous years.)

Year.	Strikes and lockouts.	Strikers and employees locked out.	Other employees thrown out of work.	Total employees thrown out of work.	Aggregate working days lost by all employees thrown out of work.
1898	711	200,769	53,138	253,907	15,289,478
1899	719	138,058	42,159	180,217	2,516,416
1900	648	136,145	53,393	188,538	3,152,694
1901	642	111,437	68,109	179,546	4,142,287
1902	442	116,824	139,843	256,667	3,479,256

The following table shows the number of strikes and lockouts and the employees thrown out of work during each year from 1898 to 1902, by industries:

STRIKES AND LOCKOUTS, AND EMPLOYEES THROWN OUT OF WORK, BY INDUSTRIES, 1898 TO 1902.

Industries.	Strikes and lockouts.					Employees thrown out of work.				
	1898.	1899.	1900.	1901.	1902.	1898.	1899.	1900.	1901.	1902.
Building trades	183	180	146	104	39	16,684	30,524	19,178	9,797	5,356
Mining and quarrying	129	109	136	210	168	177,029	46,831	74,364	112,981	208,526
Metal, engineering, and shipbuilding ..	152	140	111	103	71	21,432	21,119	19,810	22,489	15,914
Textile	99	124	96	96	82	24,978	61,499	24,143	16,609	16,706
Clothing	53	37	38	39	23	3,561	2,208	2,154	4,135	2,790
Transportation	22	47	50	20	14	3,478	12,611	23,026	2,682	1,590
Miscellaneous	67	71	60	65	41	6,261	4,212	24,968	10,489	3,079
Employees of public authorities ..	6	11	11	5	4	484	1,163	895	364	2,106
Total	711	719	648	642	442	253,907	180,217	188,538	179,546	256,667

The above table shows that in each year, except 1899, the mining and quarrying industry had the largest number of employees involved in disputes. In 1899 the great dispute of the year was in the jute industry. Probably the most noteworthy point shown in the table is the decrease in 1901 and in 1902 in the number of persons affected by disputes in the building trades.

The following table shows the principal causes of strikes and lock-outs and the number of disputes and employees directly involved in each cause from 1898 to 1902:

STRIKES AND LOCKOUTS, AND STRIKERS AND EMPLOYEES LOCKED OUT, BY PRINCIPAL CAUSES, 1898 TO 1902.

Principal cause or object.	Strikes and lockouts.					Strikers and employees locked out.				
	1898.	1899.	1900.	1901.	1902.	1898.	1899.	1900.	1901.	1902.
Wages	449	460	438	402	267	176,392	94,651	82,903	58,865	56,733
Hours of labor	19	17	6	29	20	777	3,857	718	4,198	3,044
Employment of particular classes or persons	87	102	93	84	58	9,203	8,187	10,427	10,524	11,436
Working arrangements, rules, and discipline	94	68	57	79	64	11,742	17,895	18,956	23,185	19,849
Trade unionism	51	46	45	38	29	2,215	5,130	19,573	11,531	25,489
Sympathetic disputes	8	24	5	6	1	345	8,233	1,018	1,890	14
Other causes	3	2	4	4	3	95	105	1,550	1,244	259
Total	711	719	648	642	442	200,769	138,058	135,145	111,437	116,824

During this 5-year period, 1898 to 1902, 63.76 per cent of all the strikes and lockouts related to wages. Next in the order of importance were disputes relating to the employment of particular classes or persons, to working arrangements, rules, and discipline, to trade unionism, and to hours of labor.

The following table shows the number of strikes and lockouts and the strikers and employees locked out each year during the 5-year period 1898 to 1902, classified according to results:

STRIKES AND LOCKOUTS, AND STRIKERS AND EMPLOYEES LOCKED OUT, BY RESULTS, 1898 TO 1902.

Result.	Strikes and lockouts.					Strikers and employees locked out.				
	1898.	1899.	1900.	1901.	1902.	1898.	1899.	1900.	1901.	1902.
In favor of employees	238	230	202	163	107	45,490	36,808	40,612	30,591	38,917
In favor of employers	227	245	211	280	202	120,667	60,275	33,497	37,675	35,515
Compromised	243	236	221	192	123	34,501	40,237	56,390	40,956	41,645
Indefinite or unsettled	3	8	14	7	10	111	738	4,646	2,216	2,747
Total	711	719	648	642	442	200,769	138,058	135,145	111,437	116,824

Of the 3,162 disputes reported during the 5-year period, 940, or 29.7 per cent, resulted in favor of employees; 1,165, or 36.9 per cent, resulted in favor of employers; 1,015, or 32.1 per cent, were compromised, and 42, or 1.3 per cent, remained indefinite or unsettled. Of 702,233 strikers and employees locked out during the period, 190,418, or 27.1 per cent, were engaged in disputes resulting in favor of employees; 287,629, or 41.0 per cent, in disputes resulting in favor of

employers; 213,728, or 30.4 per cent, in disputes which were compromised, and 10,458, or 1.5 per cent, in disputes which remained indefinite or unsettled.

In the table following the disputes beginning in each of the years 1898 to 1902 and the employees thrown out of work are classified according to the various methods of settlement:

STRIKES AND LOCKOUTS, AND EMPLOYEES THROWN OUT OF WORK, BY METHOD OF SETTLEMENT, 1898 TO 1902.

Method of settlement.	Strikes and lockouts.					Employees thrown out of work.				
	1898.	1899.	1900.	1901.	1902.	1898.	1899.	1900.	1901.	1902.
Arbitration	13	16	19	23	16	3,350	3,319	7,118	8,349	4,481
Conciliation	30	22	13	18	13	16,167	8,386	8,593	8,465	7,129
Direct arrangement or negotiation between the parties or their representatives....	495	502	487	456	316	206,926	156,743	155,025	143,470	222,547
Submission of employees....	71	22	45	45	40	17,590	7,054	8,895	9,362	16,570
Replacement of employees..	96	88	71	89	47	9,616	3,980	4,918	6,415	3,188
Closing of works.....	.....	3	4	5	3	.....	95	300	1,288	230
Indefinite or unsettled.....	6	6	9	6	7	258	640	3,689	2,197	2,522
Total.....	711	719	648	642	442	253,907	180,217	188,538	179,546	256,667

The great majority of the strikes and lockouts were settled by direct negotiation between the parties concerned or their representatives. Of the total of 442 disputes in 1902, not fewer than 316, or 71.5 per cent, were so settled, and these embraced 222,547, or 86.7 per cent, of all the persons involved. The number of disputes settled by arbitration and by conciliation in 1902 and the number of persons involved under each method show a decrease from the figures of the previous year.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

EIGHT-HOUR LAW—HOURS OF LABOR OF MINE EMPLOYEES—CONSTITUTIONALITY OF STATUTE—*State v. Cantwell et al., Supreme Court of Missouri, 78 Southwestern Reporter, page 569.*—This case came to the supreme court on appeal from the circuit court of Madison County, in which Henry J. Cantwell and others were convicted of the violation of a statute regulating the hours of employment in mines. The judgment of the court below was affirmed. The law in question was enacted March 23, 1901 (secs. 8793, 8794, Rev. Stat.), and forbids the employment of persons engaged in mining operations for longer than eight hours in a day of twenty-four hours, and provides a penalty. From the remarks of Judge Fox sustaining the constitutionality of this law the following is quoted:

Our first inquiry must necessarily be as to the power of the legislature to enact a reasonable police regulation which secures the health and safety of the employees. This court has indicated, in no doubtful expressions, its views upon this subject. In *State v. Loomis*, 115 Mo., loc. cit., 315; 22 S. W., 350; 21 L. R. A., 789, Black, J., in speaking for the court, unqualifiedly announced this rule: "There can be no doubt but the legislature may regulate the business of mining and manufacturing, so as to secure the health and safety of the employees, but that is not the scope of the two sections of the statute now in question." While that case did not present the question before us, it did involve, in a general way, the power of the legislature to enact laws regulating the business of mining.

It is insisted that this act makes a distinction between those working underground in search of minerals and those working underground not in search of minerals. This act only applies to the class searching for minerals. As to that class, it makes no distinction. The legislature doubtless realized the necessity of the provisions of this act being made applicable to those in search of minerals. The operation of mines is a permanent business, lasting frequently for many years. On the other hand, the digging of a well or the running of a tunnel is

not to be classed as a business. It is work that is completed in a comparatively short time. Hence there was absolutely no reason or necessity for including in the act those who might, in the construction of railroads or other work, incidentally be required to work beneath the surface of the earth.

The crucial test as to the validity of this act is narrowed down to the simple question, is the business of operating mines and searching for minerals beneath the surface of the earth, in this State, of that character which would reasonably justify the lawmaking power in distinguishing this class in such business, for the purposes of preservation of the health and safety of the employees engaged in such work?

This court, in no uncertain terms, has indicated its views as to the situation and condition of miners in the performance of labor beneath the surface of the earth. In sustaining the validity of the law which provided for the recovery by the widow and children of a miner killed by the negligence of his employer a greater amount of damages than is provided for under the general damage act, *Burgess, J., in Hamman v. Cen. Coal & Coke Co.*, 156 Mo., loc. cit. 241; 56 S. W. 1093, very tersely and clearly announced the views of this court on that subject. He said: "It is of common knowledge that no class of laborers are so much exposed to danger as miners, and that none, in proportion to the number engaged, meet with so many fatal disasters; and the legislature, doubtless for that reason, in order to protect human life, and to prevent such occurrences as far as possible, thought that the necessity for increasing the maximum amount of damages over that fixed by law in other cases existed, in order to stimulate operators of such mines to all needful and proper precautions for their protection. Moreover, 'class legislation is not necessarily obnoxious to the constitution. It is a settled construction of similar constitutional provisions that a legislative act which applies to and embraces all persons "who are or who may come into like situations and circumstances" is not partial.'" (*Humes v. Railroad*, 82 Mo., loc. cit., 231.)

The proposition is not disputed that legislation for the promotion of public health must have a reasonable relation to the end to be accomplished. If the act is a mere pretense, under the guise of police regulation, to invade the constitutional rights of the citizen, it can not and should not be upheld. But that is not this case. The legislature of Missouri presumably had before them the conditions surrounding the prosecution of the work in the mining industries of this State—the rapid and unparalleled development of that industry, the immense amount of labor required to perform the work, the nature and character of the underground work, the depth of the mineral shafts, and the danger to the health of the employees by reason of being confined beneath the surface of the earth. In view of this situation, we have reached the conclusion that the lawmakers of Missouri, fully recognizing the duty of the State to its citizens, were reasonably justified in recognizing the necessity for additional precautions in the preservation of the health and safety of those in the performance of work beneath the surface of the earth in search of minerals or other valuable substances.

There is but one remaining question. Defendants sought to introduce testimony of expert witnesses tending to show that the underground work contemplated by this act of the legislature was not attended with

danger to the health of those engaged in the performance of such work. This testimony was excluded by the court, and, in our opinion, correctly so. The validity of laws enacted in the exercise of the police power of the State can not be made dependent upon the views of experts as to the necessity of such enactment. If the constitutionality of all laws enacted for the promotion of public health and safety can be assailed in this manner, truly and sadly would it be declared that our laws rest upon a very weak and unstable foundation.

EMPLOYERS' LIABILITY—ASSUMPTION OF RISK—EFFECT OF STATUTE—*St. Louis Cordage Company v. Miller, United States Circuit Court of Appeals, Eighth Circuit, 126 Federal Reporter, page 495.*—Mary Miller had obtained a judgment for damages in the circuit court of the United States for the eastern district of Missouri for injuries received while in the employment of the St. Louis Cordage Company, and from this judgment an appeal was taken. It appeared from the evidence that Miss Miller was 20 years of age, and had worked in factories for many months, having been employed in the factory of the cordage company for about eight months. She ordinarily tended a feeding machine, but had frequently operated a forming machine for ten or fifteen minutes at a time, and had done so daily for about six weeks prior to the time of the accident. This forming machine was controlled by means of a lever, which was pulled forward to start the machine and pushed back to stop it, and when pushed back was about 5 or 6 inches from engaging cogs. This cog gearing had been covered from the time of Miss Miller's first employment in July until December 25, 1901, after which time it had remained uncovered, of which fact she was informed. She gave no notice to her employer that the gearing was exposed, and made no protest against its condition. On February 14, 1902, as the plaintiff was pushing the lever back to stop the machine her hand slipped and her fingers were caught in the cogs, necessitating the amputation of all of one finger and a part of another.

The appeal was based on a contention of the company that the court below erred in submitting the case to the jury on a charge that the plaintiff, by remaining at work even with full knowledge of the situation and of the fact that the gearing was not guarded, as required by section 6433 of the Missouri statutes, can not be held to have so assumed the risk or to have so contributed to her own injury as to preclude a recovery if the danger was not so imminent that persons of ordinary prudence under similar circumstances would have declined to incur it. The result of the appeal was a reversal of the judgment of the court below, Judge Thayer dissenting. Judge Sanborn, who announced the

opinion of the court, discussed very fully the principles and cases bearing on the question. From his remarks the following is quoted:

The defendant did not plead in this case that the plaintiff was guilty of contributory negligence. Its only defense was that the rapidly revolving cogs were seen and known by the plaintiff, that the danger from them was apparent, and that she assumed the risk of it. These are the questions, therefore, which the instruction to the jury presents: Are the risks from defective place of employment, appliances, and fellow-servants which employees assume by entering and continuing in the service of a master with knowledge of the situation and its dangers and without complaint, limited to those risks the danger from which is so imminent that persons of ordinary prudence would not incur them? Or do the risks capable of assumption in this way include those less serious chances which servants of ordinary prudence would and do incur?

The charge of the court answered the first of these questions in the affirmative, and the second in the negative. It was, in effect, that the defense of assumption of risk and the defense of contributory negligence were identical in effect and coterminous in extent, that no servant in the exercise of due care can lawfully assume the risk of a defective place, defective machinery, or defective appliances, and that it is only where the danger from them is so grave that no prudent person would chance it that a servant can lawfully contract to take the chance of the injury which they may inflict upon him.

There is an exception to the law of assumption of risk as well established as the rule itself. It is that, where a servant makes complaint to his master of a dangerous defect in his place of work or in the appliances furnished him, the risk of that defect is cast upon the master, and the servant is relieved from it for a reasonable time to enable the employer to remove it, unless the danger from the defect is so imminent that a person of ordinary prudence would not continue in the employment after the defect is discovered. *Hough v. Railway Co.*, 100 U. S., 225; 25 L. Ed., 612. Of course, cases which fall under the exception are not governed by the rule, and the only defense remaining in such cases is that of contributory negligence.

It is said that if, by entering or continuing in the service, an employee may assume the risk of a defect which arises from the violation of the duty of the master to exercise ordinary care to provide a reasonably safe place or reasonably safe appliances, the master may be in large part relieved from the discharge of this duty, and may be led to furnish more defective places and appliances than he otherwise would do, and that for this reason the doctrine of assumption of risk ought not to be permitted to apply in cases in which the danger is not so imminent that prudent persons would not incur it. The answer to this contention is: (1) That the servant is constantly at liberty to accept or reject the employment, and may do so at any time in case the wages do not in his opinion compensate him for the hazards as well as the work of his avocation; that he ought in the first instance to assume the known or obvious risks of the employment, because his constant use of the place and appliances necessarily makes him more familiar with them than in the nature of things his master or inspector can ordinarily be; and (2) that by a simple complaint to his employer he may relieve himself from the assumption of the risk for a reasonable time to enable the master to remove the defect.

The doctrine of assumption of risk is placed by the authorities and sustained upon two grounds. That doctrine is that, while it is the duty of the master to exercise ordinary care to provide a reasonably safe place for the servant to work and reasonably safe appliances for him to use, and while, unless he knows or by the exercise of reasonable care would have known that this duty has not been discharged by the master, he may assume that it has been, and may recover for any injury resulting from the failure to discharge it, yet he assumes all the ordinary risks and dangers incident to the employment upon which he enters and in which he continues, including those resulting from the negligence of his master which are known to him, or which would have been known to a person of ordinary prudence and care in his situation by the exercise of ordinary diligence. The first ground upon which this rule of law rests is the maxim, *Volenti non fit injuria*. A servant is not compelled to begin or continue to work for his master. Ordinarily, he does not work for him under a contract for a stated time. He is at liberty to retire from his employment, and his master is free to discharge him, at any time. The latter constantly offers him day by day his wages, his place to work, and the appliances which he is to use. The former day by day voluntarily accepts them. By the continuing acceptance of the work and the wages he voluntarily accepts and assumes the risk of the defects and dangers which a person of ordinary prudence in his place would have known. No one can justly be held liable to another for an injury resulting from a risk which the latter knowingly and willingly consented to incur. [Cases cited.]

The second ground upon which assumption of risk is based is that every servant who enters or continues in the employment of a master without complaint thereby either expressly or impliedly agrees with him to assume the risks and dangers incident to the employment which a person of ordinary prudence in his situation would have known by the exercise of ordinary diligence and care, and to hold his master free from liability therefor. The truth is that, while assumption of risk and contributory negligence both apply to prevent a recovery in cases in which the servant has knowingly and willingly exposed himself to dangers too imminent for prudent persons to incur, they are neither identical in effect nor coincident in extent, and the latter has no application and constitutes no defense in that great majority of cases in which assumption of risk is an impregnable bar to a recovery where prudent persons assume the obvious dangers of their employments which are neither imminent nor great. Assumption of risk is the voluntary contract of an ordinarily prudent servant to take the chances of the known or obvious dangers of his employment and to relieve his master of liability therefor. Contributory negligence is the causal action or omission of the servant without ordinary care of consequences. The one rests in contract, the other in tort. Contributory negligence is no element or attribute of assumption of risk. The latter does not prevail because the servant was or was not negligent in making his contract and in exposing himself to the defect and danger which injured him, but because he voluntarily agreed to take the risk of them. No right of action in his favor in such a case can arise against the master, because the latter violates no duty in failing to protect the servant against risks and dangers which the latter has voluntarily agreed to assume and to hold the former harmless from.

This clear distinction between assumption of risk and contributory negligence has been repeatedly announced and constantly maintained in the Federal courts and in most of the courts of the States. The law upon this subject which controls this case and all cases of this character in the Federal courts is stated in *Washington, etc., R. Co. v. McDade*, 135 U. S. 554, 570, 10 Sup. Ct. 1044, 34 L. Ed. 235, in the quotation which follows, and, so far as our investigation has extended, the rules of law thus announced have never been disregarded or modified by that court in any subsequent decision:

"Neither individuals nor corporations are bound, as employers, to insure the absolute safety of the machinery or mechanical appliances which they provide for the use of their employees. Nor are they bound to supply the best and safest or newest of those appliances, for the purpose of securing the safety of those who are thus employed. They are, however, bound to use all reasonable care and prudence for the safety of those in their service, by providing them with machinery reasonably safe and suitable for the use of the latter. If the employer or master fails in this duty of precaution and care, he is responsible for any injury which may happen through a defect of machinery which was, or ought to have been, known to him, and was unknown to the employee or servant. But if the employee knew of the defect in the machinery from which the injury happened, and yet remained in the service and continued to use the machinery without giving any notice thereof to the employer, he must be deemed to have assumed the risk of all danger reasonably to be apprehended from such use, and is entitled to no recovery. And further, if the employee himself has been wanting in such reasonable care and prudence as would have prevented the happening of the accident, he is guilty of contributory negligence, and the employer is thereby absolved from responsibility for the injury, although it was occasioned by the defect of the machinery, through the negligence of the employer."

The judge then cited a large number of cases in which this doctrine has been followed and continued:

Nor is the distinction between assumption of risk and contributory negligence less marked, nor is the former defense less applicable in cases of defects and dangers which arise during the continuance of the employment than in those involving defects which exist when the employee enters upon the service. The suggestion that in the former class of cases there is no consideration for the contract of assumption because the wages are not increased with the hazards is not persuasive. The answer to it is: (1) The doctrine of assumption of risk is founded on the maxim, *Volenti non fit injuria*, as well as upon the express or implied contract arising from the employment, and continuance in the employment after new defects and dangers become obvious is conclusive evidence of a willing assumption of the risk which they entail; and (2) since, in ordinary employments, contracts for times certain do not exist, and either party is at liberty to terminate the service at any time, there is in fact a constantly recurring daily offer and daily acceptance of the risks of the known or obvious dangers and defects of the place and of the appliances, and of the wages tendered to induce an assumption of the work and the hazards. The reason which underlies the entire rule is that the servant who is constantly working in the place provided for him and daily using the tools and appliances

furnished to him is more likely to know and to appreciate the dangers from defects in them than the master or his inspector, who, in the very nature of things, can not see and know them so frequently and intimately as the employee who constantly uses them. This was the reason which induced the application of this rule to defects and dangers existing when servants enter upon their engagements, and when, in the nature of things, they are far less familiar with the defects and dangers incident to their avocations than they subsequently become after they have been long in the service. The reason of the rule applies with much greater force to dangers which arise and become known or are obvious to servants during their employment, because they have then become more familiar with their place and their appliances, and have earlier and better means of knowledge, and generally a better knowledge of changes in them, and of the effect and dangers of such changes, than they had of the dangers and defects incident to the original employment, and than their master or his inspectors can possibly obtain. Hence the rule declared by the Supreme Court in *Washington, etc., Railroad Co. v. McDade* [supra], that if an injury is inflicted upon an employee on account of a defect and danger which arose during his employment, yet "if the employee knew of the defect in the machinery from which the injury happened, and yet remained in the service and continued to use the machinery without giving any notice thereof to the employer, he must be deemed to have assumed the risk of all danger reasonably to be apprehended from such use, and is entitled to no recovery."

The authorities and opinions to which reference has now been made have forced our minds irresistibly to the conclusion that the following rules of law have become irrevocably settled by the great weight of authority in this country, and by the opinions of the Supreme Court, which, upon well-settled principles, must be permitted to control the opinion and action of this court:

A servant by entering or continuing in the employment of a master without complaint assumes the risks and dangers of the employment which he knows and appreciates, and also those which an ordinarily prudent person of his capacity and intelligence would have known and appreciated in his situation.

A servant who knows, or who by the exercise of reasonable prudence and care would have known, of the risks and dangers which arose during his service, but who continues in the employment without complaint, assumes those risks and dangers to the same extent that he undertakes to assume those existing when he enters upon the employment.

Among the risks and dangers thus assumed are those which arise from the failure of the master to completely discharge his duty to exercise ordinary care to furnish the servant with a reasonably safe place to work and reasonably safe appliances and tools to use.

Assumption of risk and contributory negligence are separate and distinct defenses. The one is based on contract, the other on tort. The former is not conditioned or limited by the existence of the latter, and is alike available whether the risk assumed is great or small, and whether the danger from it is imminent and certain or remote and improbable.

The court below fell into an error when it instructed the jury that although the plaintiff continued in the employment of the defendant

by the side of the visible unguarded gearing with full knowledge that the cogs which injured her were uncovered, still she could not be held to have assumed the risk of working by their side unless the danger from them was so imminent that persons of ordinary prudence would have declined to incur it under similar circumstances.

There is another alleged error specified. A preliminary question for the judge always arises at the close of the evidence before a case can be submitted to the jury. That question is, not whether or not there is any evidence, but whether or not there is any substantial evidence upon which a jury can properly render a verdict in favor of the party who produces it.

The factory act of Missouri (2 Rev. St. 1899, sec. 6433) does not abolish the defense of assumption of risk in cases which fall under its provisions. In this respect it differs from the act of the Congress of the United States (act March 2, 1893, c. 196, 27 Stat. 531 [U. S. Comp. St. 1901, p. 3174]), which requires cars engaged in interstate commerce to be equipped with automatic couplers. Congress in that act expressly provided that in case the railroad companies failed to comply with its terms the employees should not be deemed to have assumed the risk thereby occasioned. (Act March 2, 1893, c. 196, sec. 8, p. 532, 27 Stat. 532 [U. S. Comp. St. 1901, p. 3176]). The legislature of Missouri had power to apply a similar provision to cases in which employers failed to keep their machinery safely and securely guarded, but they did not do so. The negligence of the master to safely and securely guard his machinery in accordance with the provisions of the law of Missouri is of the same nature as his negligence in providing a reasonably safe floor or ax or other tool or appliance, and there is no reason why an action for a resulting injury should not be subject to the defense of assumption of risk in the one case to the same extent as in the other. And so it is under the law here under consideration. The factory act of Missouri (2 Rev. St. 1899, sec. 6433) does not abolish the defense of assumption of risk in cases in which the absence of the guards and the risks and dangers from the gearing and machinery are obvious or well known to the employee and he enters or continues in the service without complaint. [Cases cited.]

The machinery, the cogs, the slipper lever, and their relation to each other, were open, visible, known. There was nothing recondite, imperceptible, uncertain, in the danger impending from them. It was plain and certain that if the employee permitted her hand to slip between the revolving cogs that hand would be injured. The defect of the unguarded gearing was obvious, the danger from it was apparent, and, without a disregard of the rules to which we have adverted and the decisions of the Supreme Court and of the other courts of the country to which reference has been made, there is no escape from the conclusion that the evidence in this case established without contradiction or dispute the facts that the plaintiff, by continuing in her employment without complaint, in the presence of an obvious and known defect and of a plain and apparent danger, assumed the risk of the injury which she sustained, so that she never had any cause of action against the defendant; and the court below should have so instructed the jury. The judgment below is accordingly reversed, and the case is remanded to the circuit court for a new trial.

From the dissenting opinion of Judge Thayer, the following is quoted:

I do not concur in the foregoing opinion. The laws of Missouri (Rev. St. 1899, sec. 6433) required the defendant company to keep the gearing which occasioned the plaintiff's injury "safely and securely guarded when possible" for the protection of its employees. This statute was enacted in pursuance of a sound public policy; that is to say, to insure, as far as possible, the safety of the many thousand artisans and laborers who are daily employed in mills and factories throughout the State, and while so employed are exposed to unnecessary risks of getting hurt if belting, gearing, drums, etc., in the establishments where they work are left uncovered when so situated that they may be covered readily. The act was inspired by the same motives which induced the Congress of the United States (act March 2, 1893, c. 196, 27 Stat. 531 [U. S. Comp. St. 1901, p. 3174]) to require cars to be equipped with automatic coupling appliances, when it was discovered that hundreds of brakemen were annually killed or made cripples for life by the use of the old-fashioned couplers that do not couple by impact. A wise policy demands that as far as possible human life shall be preserved, and that there shall not be in any community a large class of persons who are unable to earn a livelihood because they have become maimed and crippled through exposure to unnecessary risks. The statute in question is not only a wise measure of legislation, but was prompted by a humane spirit. For these reasons it should not be so applied or construed by the courts as to defeat the objects which the legislature had in view, nor in such a way as to render it less efficient than it was intended to be in the promotion of such objects.

I do not regard the question whether "contributory negligence" and "assumption of risk," considered as defenses to an action for personal injuries, are identical or are different defenses as of much practical importance. That is rather a question for the schoolmen. It matters very little whether we say of a servant who has used a defective tool or appliance, which the master has supplied, with a full knowledge of the defect and a full appreciation of the danger incident to its use, that such servant is as much at fault as the master and is guilty of contributory negligence, or whether we say that he has agreed to assume the risk and absolve the master from liability. The result, as respects the master's liability, is the same in whatever way we may choose to designate the defense.

The other questions, however, that are discussed in the opinion, and are decided in the manner above stated, are of great moment, affecting, as they do, the rights of thousands of people who are daily engaged in service and are liable to sustain injuries because reasonable precautions are not taken, by those who employ them, to prevent their being injured. The doctrine, that the servant can not rely upon the master to discharge the duty which the law imposes upon him to provide tools, appliances, and a place to work that is reasonably safe, but must be astute to discover defects therein and to appreciate dangers incident thereto, and that he must either quit work or secure the master's promise to supply better tools and safer appliances, or else be denied compensation for any injury which he may sustain, is a doctrine that is eminently well calculated to make employers less vigilant in the discharge of their duties to their employees, and less ready to obey the

provisions of such laws as may be enacted to prevent the occurrence of distressing accidents. When forced to the alternative of losing his situation or working with defective tools or in a situation that might be made safer, many an employee will choose the latter. Besides, many servants, especially those who are most worthy, will hesitate to make a demand for better and safer implements when they ought to be supplied, or to have the place where they work made safer, for fear of falling into disfavor with their employers and being classed as malcontents and grumblers. Another large class of persons who are young and venturesome, or by disposition and temperament are not prone to anticipate injuries or to appreciate dangers to which they are exposed, will continue to work with tools or appliances when they have become unsafe, utterly unconscious of the risks which they incur. Take the case at bar as an example. It is by no means improbable that the plaintiff, although she worked ten or fifteen minutes each day at the forming machine with the gearing uncovered, for several weeks before she was hurt, had never thought of such an accident as eventually befell her, and had never had a realizing sense or a conscious appreciation of the danger which my associates say, with so much confidence, she must have had, and accordingly decline to permit a jury to pass upon the question. And yet the legislature foresaw that such an accident might happen, and for the protection of persons like the plaintiff enjoined upon the defendant company the duty of covering these gearings and keeping them covered so that such accidents might not happen. In other words, the legislature made it the duty of the defendant company to protect the plaintiff from the risk to which they caused her to be exposed.

On grounds of public policy, therefore, and to insure the faithful discharge by employers of the duty which the law devolves on them, and to prevent them from forcing their employees to assume risks which they of right ought to assume, the law ought to be as it was declared by the learned trial judge, that the plaintiff was not debarred from recovering compensation for the injuries which she sustained, merely by reason of the fact that she had worked at the forming machine at intervals with the gearing uncovered, unless the jury believed that the risk of getting hurt was so grave and imminent that a person of ordinary prudence would not have incurred it. The principle so enunciated being just, both as it affects masters and servants, in that it places the responsibility for defective tools and appliances where it of right belongs, and the rule announced being easy of application and one that will tend to the protection of life and limb, there is, in my judgment, abundant authority to sustain it. [Cases cited.]

The defendant company having failed to perform its statutory duty of keeping the gearing of the forming machine covered, and the plaintiff below having been injured by reason of such neglect, I think, for the reasons already stated, that the trial court properly advised the jury that she might recover, unless the risk which was incurred by working in proximity to the uncovered gearing was so great and imminent that a prudent person of the plaintiff's age and in her situation would not have incurred it. If such a duty can be evaded by voluntary agreements made by employers with their employees, and by implication only, then the existence of such agreements, when alleged, should be found by a jury. In no other way, in my judgment, will such statutes prove effective for the protection of human life.

DECISIONS UNDER COMMON LAW.

EMPLOYERS' LIABILITY—ACCIDENT INSURANCE—NOTICE—DISEASE AS ACCIDENTAL INJURY.—*Columbia Paper Stock Company v. Fidelity and Casualty Company of New York, Court of Appeals at St. Louis, 78 Southwestern Reporter, page 320.*—In this case the Columbia Paper Stock Company sued the Fidelity and Casualty Company of New York to recover an amount claimed as due the first-named company on a judgment recovered by one of its employees. The Paper Stock Company held a policy of the insurance company covering employers' liability for accidental injuries occurring to its employees incurred in the course of their employment. One of such employees, Anna Nickel, had recovered a judgment on account of bodily disease contracted by her by the handling of infected rags, or other poisonous material, in the course of her employment as sorter in the Paper Stock Company's business. Her illness became evident on the 14th day of April, after which date she performed no labor for her employers. On the 24th of April the forewoman under whom Mrs. Nickel worked first learned of the continued illness of the claimant, but the employing company was not notified of such fact until the 31st of May, at which time the insurance company was promptly notified of the claim and action, after the suit had been instituted by Mrs. Nickel to recover damages for the injury. One element of the contract between the Paper Stock Company and the insurance company was that upon the occurrence of an accident immediate notice thereof, with the fullest information obtainable at the time, should be given to the home office of the company at New York City or its duly authorized local agent. It was contended by the insurance company that this condition had not been complied with, and further, that disease produced by a known cause was not included under the protection against accidental injuries. The St. Louis circuit court rendered judgment in favor of the Paper Stock Company, from which judgment this appeal was taken, with the result that the judgment of the court below was affirmed. Judge Reyburn, who delivered the opinion of the court, used in part the following language:

Under this state of facts, appellant [the insurance company] insists that respondent failed to comply with the provision of the policy respecting notice. The demand of such notice, under the qualifications presently defined, is reasonable, and it is material and important to the insurer. The purpose, manifestly, is to advise appellant promptly of the existence of any claim, putting it upon inquiry, and so afford it full opportunity to investigate the facts attending the occurrence, and to enable it to adjust and pay the loss, or prepare to resist it, as it may conclude just or expedient. As indicated by an eminent commentator on the law of insurance, to give the word "immediate," in such contracts, a literal significance, in most cases,

would deprive the insured of indemnity, and policies of insurance would be converted into instruments of fraud. (2 May, Insurance (4th ed.) sec. 462.) In *McFarland v. Accident Ass'n*, 124 Mo., 218; 27 S. W. 436, the legal translation of the word "immediate," as applied to notice, was directly considered, and it was held that this term could not be construed literally without in many cases causing a forfeiture, and that it was frequently impossible, under the circumstances of the accident, to give immediate notice, and that this and similar words should be construed to mean within a reasonable time. The decision continued: "So, though the time in which the notice shall be given is fixed under the contract, if the circumstances of the accident are such as to make it impossible to comply with the condition, giving the notice within a reasonable time after it becomes possible has been held sufficient." This language is adopted as expressive of the true rule in the well-considered case of *Woodmen, etc., Ass'n v. Pratt*, 62 Neb. 673, 87 N. W. 546, 55 L. R. A. 291, 89 Am. St. Rep. 777. Provisions of this description also affecting the action of the assured subsequent to the event, the subject of indemnity, and consequently after the loss, if any, has ensued, and the liability measurably attached, have received in this State a construction of the utmost liberality toward the beneficiary, to obviate a forfeiture. Our conclusion, therefore, is that, if no time is specified or notice is required to be given immediately, notice given with diligence and in a reasonable time, due regard being had to the attending circumstances, is a legal compliance with such condition. [Cases cited.] Nor can the knowledge of the assistant forewoman of respondent of the original attack of sickness of the sufferer, its continuance, and its assigned cause be imputed to respondent. Respondent, as employer and principal, would not be charged with any knowledge of or notice to its forewoman, unless such knowledge or notice was in respect to a matter within the scope of her duties in respondent's employ. It is obvious that so ordinary an occurrence as the illness and consequent absence of an employee imported no claim or liability under the policy, and it is equally apparent that the knowledge of the forewoman was not derived as the result or consequence of any notice sought to be given her by virtue of her service in respondent's employ or as its representative. Knowledge of those in the control and the conduct and superintendence of respondent's business at its premises at Kansas City, its general manager and assistant manager, if they had possessed the knowledge of the forewoman—especially that, upon the continuation of her illness, Anna Nickel had claimed that her sickness was attributable to handling infected rags and poisonous paper in respondent's employ—might have been asserted to have been the knowledge of the respondent, but not such knowledge on the part of an assistant forewoman, an employee of power and authority proven to have been so limited. A corporate principal is affected with notice to its agents to the same extent and in the same manner as an individual, and can only be charged with notice of those facts in the knowledge of its agents, within the scope of the business intrusted to them.

Appellant further puts forward the contention that a disease produced by a known cause can not be accidental, and therefore such a disease as acute kidney disease or dropsy produced by the absorption of poison, consequent on handling infected paper or rags in the course of employment, is not covered by the policy; and the legal question is—

thus sharply presented whether the injuries consequent on such illness resulted from a cause against which the insurance was issued. In the construction of such contracts, it is well established that not only should they be given a fair and reasonable construction, so as to give effect to the objects intended by the parties thereto, but any obscurity in the language employed in the contract is to be resolved against the insurer, and to receive a broad and liberal interpretation in favor of the assured. Again borrowing from the eminent authority on the law of insurance, above referred to: "No rule in the interpretation of a policy is more fully established, or more imperative and controlling, than that which declares that in all cases it must be liberally construed in favor of the insured, so as not to defeat, without a plain necessity, his claim to the indemnity which, in making the insurance, it was his object to secure. When the words are, without violence, susceptible of two interpretations, that which will sustain his claim and cover the loss must, in preference, be adopted." (1 May, Insurance (4th ed.) secs. 174, 175.)

In conclusion, after full consideration, upon a fair and legal construction of the terms of this policy, which were for indemnity against loss from common-law or statutory liability for damages on account of bodily injuries, fatal or nonfatal, accidentally suffered, the injury sustained by respondent's employee upon its premises in handling the infected rags and wall paper fell fairly within the true meaning and intent. The judgment below was rendered for the right party, and is affirmed.

INJUNCTION—STRIKES—CRIMINAL LAW—BONDS TO KEEP PEACE—PROPERTY RIGHTS—ADEQUATE REMEDY—*Underhill v. Murphy et al.*, *Court of Appeals of Kentucky*, 78 *Southwestern Reporter*, page 482.—In this case John T. Underhill sought an injunction in the circuit court of Kenton County against Walter Murphy and others. Underhill was an employing plumber, and had been engaged in the business in Covington, Ky., for a number of years and had built up a profitable trade. He had on hand at the time of the trouble giving rise to this action a number of important contracts. His workmen were members of a labor union, and, a difference having arisen between Underhill and his employees, they left his service. Underhill then employed nonunion men to assist him in carrying out his contracts, whereupon his former employees instituted measures to break up his business by the use of threats, intimidation, force, and violence, all of which was pleaded and sufficiently proved, it appearing that not only was the plaintiff's place of business picketed, but that actual assaults had been made and the assistance of the police had been required at different times to safeguard Underhill and his workmen. The court stated that "the proof shows a determined effort by conspiracy on the part of the defendants to break up and destroy the plaintiff's business by force and violence unless he acceded to the demands of the union to which they belonged." The prayer for an injunction had been denied in the court below (see Bulletin of the Department of Labor No. 37, p. 1203),

from which judgment Underhill appealed to the court of appeals and obtained a reversal, the granting of an injunction being directed. The following selections from the remarks of Judge Hobson, who delivered the opinion of the court, set forth the grounds of the court's action:

When a man has, by years of toil and fair dealing with his customers, built up a valuable business and good will, he is as much entitled to protection by the law in this species of property as in the home that shelters him, or the coat that protects him from the winter's cold. The right of the plaintiff to carry on his business and to carry out the contracts which he had made was a valuable property right, and no less intrinsically property than if the same amount of money had been invested in a stock of merchandise or a city lot. If the defendants had conspired together by force and violence to burn up the merchandise, or to carry off the surface of the lot, upon elementary principles, the chancellor would protect the plaintiff from the destruction of his property. The acts of the defendant as truly destroyed the plaintiff's property when they broke up his business by force and intimidation as they would have done in the case of visible property by burning it or carrying it off. Among the inalienable rights which by the first section of the State constitution are guaranteed as inherent in all men is "the right of acquiring and protecting property." The right to acquire and protect property is as sacred in the case of intangible property as tangible, and an injunction may be granted to protect intangible rights no less than those that are tangible.

The learned circuit judge refused to interfere on the ground that the acts committed by the defendants are criminal in nature, and punishable by the police department; that, if he had jurisdiction to enjoin the commission of the acts, it necessarily followed that he had jurisdiction to enforce a penalty for a violation of his order; and that this would amount, in substance, to holding that he could try and convict the defendants for a criminal act without the intervention of a jury. We cannot concur in this reasoning. If the defendants were undermining the plaintiff's house, or about to slide it with his family in it into the Ohio River, an injunction would not be refused on the idea that, if they thus drowned any of the people in the house, they might be punished for murder, or, if they destroyed the house only, they might be indicted under the statute for the willful destruction of private property. The reason is plain: The punishment of the defendants for murder or for the destruction of the house, while it would vindicate the majesty of the law, would not help the plaintiff in any way. To relegate him to the processes of the criminal law is to allow his property to be destroyed, and to give him no remedy therefor but the satisfaction of seeing the wrongdoers punished. The inherent and inalienable right of acquiring and protecting property which is guaranteed by the constitution means nothing if it means only this. If a man must stand by and see his property destroyed, and has no remedy but the slow process of the criminal law, which only punishes the offender, but restores nothing to him, then the constitutional guaranty of the enjoyment of life, liberty, and property under the law is a meaningless generality. If, in this case, the defendants are fined in the police court, this will not restore to the plaintiff the loss he has sustained by reason of the interruption of his business and his consequent inability to carry out his

contracts. When his customers are driven away, and the good will of his business is destroyed, it will be too late, so far as he is concerned, for the punishment of the appellees by the criminal law to reestablish his ruined business, or even prevent future loss. If the circuit court had granted the injunction, and the defendants had disobeyed it, and he had punished them for contempt, the punishment would have been for their disobedience of the order of the court, regardless of whether their acts were also a violation of the criminal law of the land for which they might be indicted and punished in the criminal court. His judgment punishing them for contempt would have been no bar to the criminal proceeding against them for their violation of the law, and would not have affected this proceeding in any way. His judgment would have established nothing more than that they were guilty of contempt of court in disobeying his orders. Whether they were also guilty of a criminal offense would have to be tried in the proper forum, and not in this action. The power of a court to punish for contempt is as old as the common law, and inherent in every court. The punishment for contempt would relate only to acts done after the injunction was granted, in disobedience of it; and even in this proceeding the defendants are protected as to a jury trial by section 1291, Ky. St., 1903, which provides: "A court shall not for contempt impose upon the offender a fine exceeding thirty dollars (\$30), or imprison him exceeding thirty hours, without the intervention of a jury."

It is also urged that the plaintiff had an adequate remedy under the criminal code by having the defendants to give security to keep the peace and be of good behavior. The rule that an injunction will not be granted where there is an adequate remedy at law refers to legal remedies, and not to criminal proceedings. In no case has it ever been otherwise applied, so far as we can find. It looks to the prevention of offenses, and not to the redress of private wrongs. It is begun by a warrant issued in the name of the Commonwealth, and is a prosecution by the Commonwealth, under the control of its officers. If a bond is required, it is taken to the Commonwealth. When the plaintiff's property is about to be destroyed, he is entitled to a remedy in his own name, and which he can himself control to protect him in the enjoyment of his own. The fact that the Commonwealth might also take out a proceeding to require the defendant to give security for good behavior is immaterial, for both proceedings may be prosecuted at the same time—one in the criminal court by the Commonwealth, and the other in equity by the plaintiff; one to prevent the commission of offenses, the other to preserve the plaintiff's property from destruction.

LABOR ORGANIZATIONS—BENEFIT FUNDS—RULES—*Steinert v. United Brotherhood of Carpenters and Joiners of America, Supreme Court of Minnesota, 97 Northwestern Reporter, page 668.*—In this case Augusta Steinert, as administratrix of the estate of Ferdinand Steinert, deceased, sued the United Brotherhood of Carpenters and Joiners of America for a payment alleged to be due the said Steinert's estate from the benefit fund of the brotherhood above named. There was no question as to the facts in the case. Mr. Steinert had been a mem-

ber of the organization in good standing for a number of years prior to his death and was at that time a member unless he had ceased to be so because he had engaged in the sale of liquors a short time before. The constitution provided that "No person who engages in the sale of intoxicating drinks can be admitted or retained as a member." Another provision was to the effect that: "Each member will be entitled to all the benefits, rights, and privileges of this United Brotherhood, as prescribed in this constitution, by strictly adhering to his obligation, and by him and his local union obeying the constitution and rules." The municipal court of Minneapolis had allowed the claim against the brotherhood, whereupon an appeal was taken to the supreme court, which affirmed the judgment of the court below. The question involved and the grounds on which the award was made are set forth in the remarks of Judge Collins, who delivered the opinion of the court, from which the following is quoted:

The question is: Must charges be preferred, and an opportunity to defend given, to an accused member before his membership ceases, or does the act of selling intoxicating drinks terminate the membership without any further proceedings? That Steinert disregarded the laws of the order stands admitted, but it does not follow that this fact of itself ended all liability of the defendant on his certificate of membership, issued when he was eligible, under which he had good standing, and in which he had acquired a property right. This depends entirely on the contract of membership, of which the constitution was a part. It was expressly provided in the certificate that a member must strictly adhere to his obligation, and obey the constitution and all rules of the union based thereon. No person who engages in the sale of intoxicating drinks can be "retained" as a member. Provisions of this kind, which may deprive one of property rights acquired when paying dues from time to time, are to be construed strictly, for forfeitures are not favored in the law. A member should not be deprived of benefits arising out of his certificate of membership, unless a construction of the constitution makes such a result absolutely necessary. We do not regard these constitutional provisions, taken as a whole, as indicating an intent to make the one above quoted self-executing or operative. It would have been very easy for the association, which undoubtedly prepared its own constitution, if such had been the intent, to have provided explicitly that in case a member engaged in the sale of intoxicating drinks his membership should forthwith and immediately cease, his certificate should stand canceled, and that he should have no further rights under it. No such language, or its equivalent, was used. By the use of the words "retain" in one place and "retained" in another, the provisions were made ambiguous and indefinite. The difficulty in construing is increased by the provisions which seem to be applicable respecting the preferring of charges and the methods prescribed for trials of offending members. One who has properly united with a beneficial association, and has paid his assessments in due season, can not be declared to have forfeited his rights upon doubtfully constructed provisions in the constitution; and the one in question was not self-executing or operating.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1896.

[The Second Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1896. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

ILLINOIS.

ACTS OF 1903.

PAGE 187.—*Employment of children.*

SECTION 1. No child under the age of fourteen years shall be employed, permitted or suffered to work at any gainful occupation in any theater, concert hall or place of amusement where intoxicating liquors are sold, or in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, passenger or freight elevator, factory or workshop, or as a messenger or driver therefor, within this State. No child under fourteen years of age shall be employed at any work performed for wages or other compensation, to whomsoever payable, during any portion of any month when the public schools of the town, township, village or city in which he or she resides are in session, nor be employed at any work before the hour of seven o'clock in the morning or after the hour of six o'clock in the evening: *Provided*, That no child shall be allowed to work more than eight hours in any one day.

SEC. 2. It shall be the duty of every person, firm or corporation, agent or manager of any firm or corporation employing minors over fourteen years and under sixteen years of age in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, within this State, to keep a register in said mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, factory or workshop in which said minors shall be employed or permitted or suffered to work, in which register shall be recorded the name, age and place of residence of every child employed or suffered or permitted to work therein, or as messenger or driver therefor, over the age of fourteen and under the age of sixteen years; and it shall be unlawful for any person, firm or corporation, agent or manager, of any firm or corporation to hire or employ, or to permit or suffer to work in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, any child under the age of sixteen years and over fourteen years of age, unless there is first produced and placed on file in such mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, factory or workshop, theater, concert hall or place of amusement, an age and school certificate approved as hereinafter provided.

SEC. 3. Every person, firm or corporation, agent or manager of a corporation employing or permitting or suffering to work five or more children under the age of sixteen years and over the age of fourteen in any mercantile institution, store, office, laundry, hotel, manufacturing establishment, factory or workshop, shall post and keep posted in a conspicuous place in every room in which such help is employed, or permitted or suffered to work, a list containing the name, age and place of residence of every person under the age of sixteen years employed, permitted or suffered to work in such room.

SEC. 4. No child under sixteen years of age and over fourteen years of age shall be employed in any mercantile institution, store, office, hotel, laundry, manufacturing

establishment, bowling alley, theater, concert hall, or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, unless there is first produced and placed on file in such mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, factory or workshop, and accessible to the State factory inspector, assistant factory inspector or deputy factory inspector, an age and school certificate as hereinafter prescribed; and unless there is kept on file and produced on demand of said inspectors of factories a complete and correct list of all the minors under the age of sixteen years so employed who can not read at sight and write legibly simple sentences, unless such child is attending night school as hereinafter provided.

SEC. 5. An age and school certificate shall be approved only by the superintendent of schools or by a person authorized by him in writing; or where there is no superintendent of schools by a person authorized by the school board: *Provided*, That the superintendent or principal of a parochial school shall have the right to approve an age and school certificate, and shall have the same rights and powers as the superintendent of public schools to administer the oaths herein provided for children attending parochial schools: *Provided, further*, That no member of a school board or other person authorized as aforesaid shall have authority to approve such certificates for any child then in or about to enter his own establishment, or the employment of a firm or corporation of which he is a member, officer or employee. The person approving these certificates shall have authority to administer the oath provided herein, but no fee shall be charged therefor. It shall be the duty of the school board or local school authorities to designate a place (connected with their office, when practicable) where certificates shall be issued and recorded, and to establish and maintain the necessary records and clerical service for carrying out the provisions of this act.

SEC. 6. An age and school certificate shall not be approved unless satisfactory evidence is furnished by the last school census, the certificate of birth or baptism of such child, the register of birth of such child with a town or city clerk, or by the records of the public or parochial schools, that such child is of the age stated in the certificate: *Provided*, That in cases arising wherein the above proof is not obtainable, the parent or guardian of the child shall make oath before the juvenile or county court as to the age of such child, and the court may issue to said child an age certificate as sworn to.

SEC. 7. The age and school certificate of a child under sixteen years of age shall not be approved and signed until he presents to the person authorized to approve and sign the same, a school attendance certificate, as hereinafter prescribed, duly filled out and signed. A duplicate of such age and school certificate shall be filled out and shall be forwarded to the State factory inspector's office. Any explanatory matter may be printed with such certificate in the discretion of the school board or superintendent of schools. The employment and the age and school certificates shall be separately printed and shall be filled out, signed, and held or surrendered as indicated in the following forms.

SCHOOL CERTIFICATE.

(Name of school).

(City or town and date).

This certifies (name of minor) of the —th grade, can read and write legibly simple sentences. This also certifies that according to the records of this school, and in my belief, the said (name of minor) was born at (name of city or town) in (name of county) on the (date) and is now (number of years and months) old.

(Name of parent or guardian),

(Residence).

(Signature of teacher) — grade.

(Name of principal).

Correct. (Name of school).

EVENING SCHOOL ATTENDANCE CERTIFICATE.

(Date).

This certifies that (name of minor) is registered in and regularly attends the — evening school. This also certifies that according to the records of my school and in my belief the said (name of minor) was born at (name of city or town) on the — day of (year), and is now (number of years and months) old.

(Name of parent or guardian),

(Residence).

(Signature of teacher).

(Signature of principal).

AGE AND SCHOOL CERTIFICATE.

This certifies that I am (father, mother, guardian or custodian) of (name of minor), and that (he or she) was born at (name of town or city) in the (name of county, if known) and State or county of —, on the (day of birth and year of birth) and is now (number of years and months) old.

(Signature of parent, guardian or custodian),
(City or town and date).

There personally appeared before me the above named (name of person signing) and made oath that the foregoing certificate by (him or her) signed is true to the best of (his or her) knowledge. I hereby approve the foregoing certificate of (name of child), height (feet and inches), weight —, complexion (fair or dark), hair (color), having no sufficient reason to doubt that (he or she) is of the age therein certified.

OWNER OF CERTIFICATE.

This certificate belongs to (name of child in whose behalf it is drawn) and is to be surrendered to (him or her) whenever (he or she) leaves the service of the corporation or employer holding the same; but if not claimed by said child within thirty days from such time it shall be returned to the superintendent of schools, or where there is no superintendent of schools, to the school board. (Signature of person authorized to approve and sign, with official character authority) (town, or city and date.)

In the case of a child who can not read at sight and write legibly simple sentences, the certificate shall continue as follows, after the word sentences: "I hereby certify that (he or she) is regularly attending the (name of public or parochial evening school)." This certificate shall continue in force just as long as the regular attendance of said child at said evening school is certified weekly by the teacher and principal of said school.

In any city or town in which there is no public or parochial evening school, an age and school certificate shall not be approved for a child under the age of sixteen years who can not read at sight and write legibly simple sentences. When the public or parochial evening schools are not in session, an age and school certificate shall not be approved for any child who can not read at sight and write legibly simple sentences. The certificate of the principal of a public or parochial school shall be prima facie evidence as to the literacy or illiteracy of the child.

SEC. 8. No person shall employ any minor over fourteen years of age and under sixteen years, and no parent, guardian or custodian shall permit to be employed any such minor under his control, who can not read at sight and write legibly simple sentences, while a public evening school is maintained in the town or city in which such minor resides, unless such minor is a regular attendant at such evening school.

SEC. 9. The State inspector of factories, his assistants or deputies, shall visit all mercantile institutions, stores, offices, laundries, manufacturing establishments, bowling alleys, theaters, concert halls or places of amusement, factories or workshops, and all other places where minors are or may be employed in this State, and ascertain whether any minors are employed contrary to the provisions of this act. Inspectors of factories may require that age and school certificates, and all lists of minors employed in such factories, workshops, mercantile institutions and all other places where minors are employed as provided for in this act, shall be produced for their inspection on demand: And, provided further, That upon written complaint to the school board or local school authorities of any city, town, district or municipality, that any minor (whose name shall be given in such complaint) is employed in any mercantile institution, store, office, laundry, manufacturing establishment, bowling alley, theater, concert hall or place of amusement, passenger or freight elevator, factory or workshop, or as messenger or driver therefor, contrary to the provisions of this act, it shall be the duty of such school board or local school authority to report the same to the State inspector of factories.

SEC. 10. No person under the age of sixteen years shall be employed or suffered or permitted to work at any gainful occupation more than forty-eight hours in any one week, nor more than eight hours in any one day; or before the hours of seven o'clock in the morning or after the hour of seven o'clock in the evening. Every employer shall post in a conspicuous place in every room where such minors are employed, a printed notice stating the hours required of them each day of the week, the hours of commencing and stopping work, and the hours when the time or times allowed for dinner or for other meals begins and ends. The printed form of such notice shall be

furnished by the State inspector of factories, and the employment of any such minor for longer time in any day so stated shall be deemed a violation of this section.

SEC. 11. No child under the age of sixteen years shall be employed at sewing belts, or to assist in sewing belts, in any capacity whatever; nor shall any child adjust any belt to any machinery; they shall not oil or assist in oiling, wiping or cleaning machinery; they shall not operate or assist in operating circular or hand saws, wood-shapers, wool [wood]-jointers, planers, sandpaper or wood-polishing machinery, emery or polishing wheels used for polishing metal, wood-turning or boring machinery, stamping machines in sheet metal and tinware manufacturing, stamping machines in washer and nut factories, operating corrugating rolls, such as are used in roofing factories, nor shall they be employed in operating any passenger or freight elevators, steam boiler, steam machinery, or other steam generating apparatus, or as pin boys in any bowling alleys; they shall not operate or assist in operating dough brakes, or cracker machinery of any description; wire or iron straightening machinery; or shall the [they] operate or assist in operating rolling mill machinery punches or shears, washing, grinding or mixing mill or calender rolls in rubber manufacturing, nor shall they operate or assist in operating laundry machinery; nor shall children be employed in any capacity in preparing any composition in which dangerous or poisonous acids are used, and they shall not be employed in any capacity in the manufacture of paints, colors or white lead; nor shall they be employed in any capacity whatever in operating or assisting to operate any passenger or freight elevator; nor shall they be employed in any capacity whatever in the manufacture of goods for immoral purposes, or any other employment that may be considered dangerous to their lives or limbs, or where their health may be injured or morals depraved; nor in any theater, concert hall, or place of amusement wherein intoxicating liquors are sold; nor shall females under sixteen years of age be employed in any capacity where such employment compels them to remain standing constantly.

SEC. 12. The presence of any person under the age of sixteen years in any manufacturing establishment, factory or workshop, shall constitute prima facie evidence of his or her employment therein.

SEC. 13. It shall be the special duty of the State factory inspector to enforce the provisions of this act, and to prosecute all violations of the same before any magistrate or any court of competent jurisdiction in this State. It shall be the duty of the State factory inspector, assistant State factory inspector and deputy State factory inspectors under the supervision and direction of the State factory inspector, and they are hereby authorized and empowered to visit and inspect, at all reasonable times, and as often as possible, all places covered by this act.

SEC. 14. Whoever, having under his control a child under the age of 16 years, permits such child to be employed in violation of the provisions of this act, shall for each offense be fined not less than \$5 nor more than \$25, and shall stand committed until such fine and costs are paid. A failure to produce to the inspector of factories, his assistants or deputies, any age and school certificates, or lists required by this act, shall constitute a violation of this act, and the person so failing shall, upon conviction, be fined not less than \$5 nor more than \$50 for each offense. Every person authorized to sign the certificate prescribed by section 7 of this act, who certifies to any materially false statement therein shall be guilty of a violation of this act, and upon conviction, be fined not less than \$5 nor more than \$100 for each offense, and shall stand committed until such fine and costs are paid. Any person, firm or corporation, agent or manager, superintendent or foreman of any firm or corporation, whether for himself or for such firm or corporation, or by himself or through sub-agents or foreman, superintendent or manager, who shall violate or fail to comply with any of the provisions of this act, or shall refuse admittance to premises, or otherwise obstruct the factory inspector, assistant factory inspector or deputy factory inspector in the performance of their duties, as prescribed by this act, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined not less than \$5 nor more than \$100 for each offense, and shall stand committed until such fine and costs are paid.

SEC. 15. "An act to prevent child labor," approved June 17, 1891, in force July 1, 1891, and all other acts and parts of acts in conflict with this act are hereby repealed.

Approved May 15, 1903.

PAGE 193.—*Inspectors of factories.*

SECTION 1. Section nine (9) of an act entitled, "An act to regulate the manufacture of clothing, wearing apparel and other articles in this State, and to provide for the appointment of State inspectors to enforce the same, and to make an appropri-

tion therefor," approved June 17, 1893, in force July 1, 1893, is hereby amended to read as follows:

SEC. 9. The governor shall, upon the taking effect of this act, appoint a factory inspector at a salary of two thousand dollars (\$2,000) per annum, an assistant factory inspector at a salary of one thousand two hundred and fifty dollars (\$1,250) per annum and eighteen (18) deputy factory inspectors of whom seven shall be women, at a salary of one thousand dollars (\$1,000) per annum. The term of office of the factory inspector shall be for four years, and the assistant factory inspector and the deputy factory inspectors shall hold their office during efficient service and good behavior. Said inspector, assistant inspector and deputy inspectors shall be empowered to visit and inspect at all reasonable hours and as often as practicable, the workshops, factories and manufacturing establishments in this State, where the manufacture of goods is carried on. And the inspector shall report in writing to the governor on the 15th day [of] December, annually, the result of their inspections and investigations, together with such other information and recommendations as they may deem proper. And said inspectors shall make a special investigation into alleged abuses in any such workshops whenever the governor shall direct, and report the results of the same to the governor. It shall also be the duty of said inspectors to enforce the provisions of this act, and to prosecute all violations of the same before any magistrate or any court of competent jurisdiction in the State, and perform such other duties as now are or shall hereafter be prescribed by law. And it shall be the duty of the state's attorney of the proper county, upon request of the factory inspector or his deputy, to prosecute any violation of this act. Said inspector shall, by written order filed with the governor, divide the State into fifteen inspection districts, due regard being had to the number of factories and the amount of work required to be performed in each district. And he shall assign to each district a deputy inspector who shall have charge of the inspections in the district to which he is assigned under the supervision of the inspector and assistant inspector. The inspector may at any time, when in his discretion the good of the service requires, change a deputy inspector from one district to another, or reassign the districts of the State among the several deputy inspectors under his charge. He may at any time, when the conditions are changed or in his discretion the good of the service requires, by a like order filed with the governor, redivide the State in inspection districts, changing the territory embraced within the several districts as to him may seem advisable.

Approved May 15, 1903.

PAGE 154.—*Free public employment offices.*

SECTION 1. Free employment offices are hereby created as follows: One in each city of not less than fifty thousand population, and three in each city containing a population of one million or over, for the purpose of receiving applications of persons seeking employment, and applications of persons seeking to employ labor. Such offices shall be designated and known as Illinois Free Employment Offices.

SEC. 2. Within sixty days after this act shall have been in force, the State board of commissioners of labor shall recommend, and the governor, with the advice and consent of the senate, shall appoint a superintendent and assistant superintendent and a clerk for each of the offices created by section 1 of this act, who shall devote their entire time to the duties of their respective offices. The assistant superintendent or the clerk shall in each case be a woman. The tenure of such appointment shall be two years, unless sooner removed for cause. The salary of each superintendent shall be fifteen hundred (\$1,500) dollars per annum, the salary of such assistant superintendent shall be one thousand two hundred (\$1,200) dollars per annum. The salary of such clerk shall be one thousand (\$1,000) dollars per annum, together with proper amounts for defraying the necessary costs of equipping and maintaining the respective offices.

SEC. 3. The superintendent of each such free employment office shall, within sixty days after appointment, open an office in such locality as shall have been agreed upon between such superintendent and the secretary of the bureau of labor statistics, as being most appropriate for the purpose intended; such office to be provided with a sufficient number of rooms and apartments to enable him to provide, and he shall so provide, a separate room or apartment for the use of women registering for situations or help. Upon the outside of each such office, in position and manner to secure the fullest public attention, shall be placed a sign which shall read in the English language, Illinois Free Employment Office, and the same shall appear either upon the outside windows or upon signs in such other languages as the location of each such office shall render advisable. The superintendent of each such free

employment office shall receive and record in books kept for that purposes [purpose], names of all persons applying for employment or help, designating opposite the names and addresses of each applicant, the character of employment or help desired. Separate registers for applicants for employment shall be kept, showing the age, sex, nativity, trade or occupation of each applicant, the cause and duration of nonemployment, whether married or single, the number of dependent children, together with such other facts as may be required by the bureau of labor statistics to be used by said bureau: *Provided*, That no special registers shall be open to public inspection at any time, and that such statistical and sociological data as the bureau of labor may require shall be held in confidence by said bureau, and so published as not to reveal the identity of any one: *And, provided further*, That any applicant who shall decline to furnish answers as to the questions contained in special registers shall not thereby forfeit any rights to any employment the office might secure.

SEC. 4. Each such superintendent shall report on Thursday of each week to the State bureau of labor statistics the number of applications for positions and for help received during the preceding week, and the number of positions secured, also those unfilled applications remaining on the books at the beginning of the week. It shall also show the number and character of the positions secured during the preceding week. Upon receipt of these lists, and not later than Saturday of each week, the secretary of the said bureau of labor statistics shall cause to be printed a sheet showing separately, and in combination, the lists received from all such free employment offices.

SEC. 5. It shall be the duty of each such superintendent of a free employment office to immediately put himself in communication with the principal manufacturers, merchants and other employers of labor, and to use all diligence in securing the cooperation of the said employers of labor, with the purposes and objects of said employment offices. To this end it shall be competent for such superintendents to advertise in the columns of newspapers, or other medium, for such situations as he has applicants to fill, and he may advertise in a general way for the cooperation of large contractors and employers in such trade journals or special publication as reach such employers, whether such trade or special journals are published within the State of Illinois or not.

SEC. 6. It shall be the duty of each such superintendent to make report to the State bureau of labor statistics annually, not later than December first of each year, concerning the work of his office for the year ending October first of the same year, together with a statement of the expenses of the same, including the charges of an interpreter when necessary, and such report shall be published by the said bureau of labor statistics annually with its coal report. Each such superintendent shall also perform such other duties in the collection of statistics of labor as the secretary of the bureau of labor statistics may require.

SEC. 7. No fee or compensation shall be charged or received, directly or indirectly, from persons applying for employment or help through said free employment offices, and any superintendent, assistant superintendent or clerk, who shall accept, directly or indirectly, any fee or compensation from any applicant or from his or her representative, shall be deemed guilty of a misdemeanor, and upon conviction, shall be fined not less than twenty-five nor more than fifty dollars and imprisoned in the county jail not more than thirty days.

SEC. 8. The term, "applicant for employment," as used in this act, shall be construed to mean any person seeking work of any lawful character, and "applicant for help" shall mean any person or persons seeking help in any legitimate enterprise; and nothing in this act shall be construed to limit the meaning of the term work to manual occupation, but it shall include professional service, and all other legitimate service.

SEC. 9. No person, firm or corporation in this State shall open, operate or maintain a private employment agency for hire, or where a fee is charged to either applicant for employment or for help without first obtaining a license for the same from the State commissioners of labor. Such license fee, in cities of fifty thousand (50,000) population and over, shall be fifty dollars (\$50) per annum. In all cities containing less than fifty thousand (50,000) population a uniform fee of twenty-five dollars (\$25) per annum will be required. Every license shall contain a designation of the city, street and number of the building in which the licensed party conducts said employment agency. The license, together with a copy of this act, shall be posted in a conspicuous place in each and every employment agency. No agency shall print, publish or paint on any sign, window, or insert in any newspaper or publication, a name similar to that of the Illinois Free Employment Office. The commissioners of labor shall require with each applicant for a license a bond in the penal sum of five hundred dollars (\$500), with one or more sureties, to be approved by the said commissioners, and conditioned that the obligor will not violate any of the duties, terms,

conditions, provisions or requirements of this act. The said commissioners are authorized to cause an action or actions to be brought on said bond in the name of the people of the State of Illinois for any violation of any of its conditions, and they may also revoke, upon a full hearing, any license, whenever, in their judgment, the party licensed shall have violated any of the provisions of this act. It shall be the duty of every licensed agency to keep a register, in which shall be entered the name and address of every applicant. Such licensed agency shall also enter into a register the name and address of every person who shall make application for help or servants; and the name and nature of the employment for which such help shall be wanted. Such register shall, at all reasonable hours, be open to the inspection and examination of the commissioners of labor or their agents. Where a registration fee is charged for receiving or filing applications for employment or help, said fee shall in no case exceed the sum of two dollars (\$2), for which a receipt shall be given, in which shall be stated the name of the applicant, the amount of the fee, the date, the name or character of the work or situation to be procured. In case the said applicant shall not obtain a situation or employment through such licensed agency within one month after registration as aforesaid, then said licensed agency shall forthwith repay and return to such applicant, upon demand being made therefor, the full amount of the fee paid or delivered by said applicant to said licensed agency, provided that such demand be made within thirty (30) days after the expiration of the period aforesaid. No agency shall send or cause to be sent any female help or servants to any place of bad repute, house of ill-fame or assignation house, or to any house or place of amusement kept for immoral purposes. No such licensed agency shall publish or cause to be published any false or fraudulent notice or advertisement, or to give any false information, or to make any false promise concerning or relating to work or employment to anyone who shall register for employment, and no licensed agency shall make any false entries in the register to be kept as herein provided. No person, firm or corporation shall conduct the business of any employment office in, or in connection with, any place where intoxicating liquors are sold.

Sec. 10. It shall be the duty of the commissioners of labor, and the secretary thereof, to enforce this act. When informed of any violation, it shall be their duty to institute criminal proceedings for the enforcement of its penalties before any court of competent jurisdiction. Any person convicted of a violation of the provisions of this act shall be guilty of a misdemeanor and shall be fined not less [than] fifty dollars (\$50) nor more than one hundred (100) dollars for each offense, or by imprisonment in the county jail for a period not exceeding six (6) months, or both, at the discretion of the court.

Sec. 11. A private employment agency is defined and interpreted to mean any person, firm or corporation furnishing employment or help or giving information as to where employment or help may be secured, or who shall display any employment sign or bulletin, or through the medium of any card, circular or pamphlet, offering employment or help, shall be deemed an employment agency, and subject to the provisions of this act, whether a fee or commission is charged or not: *Provided*, That charitable organizations are not included.

Sec. 12. All money or moneys received from fees and fines shall be held by the said commissioners of labor, and shall constitute a fund for the purpose of enforcing the provisions of this act; and the said commissioners shall, at the end of each fiscal year, make an account of said fund and pay into the State treasury whatever balance shall remain after paying the necessary disbursements for the purpose of enforcing the provisions of this act.

Sec. 13. All printing, blanks, blank books, stationery and such other supplies as may be necessary for the proper conduct of the business of the offices herein created shall be furnished by the secretary of state upon requisition for the same made by the superintendents of the several offices.

Approved May 11, 1903.

PAGE 198.--*Payment of wages.*

SECTION 1. It shall be unlawful for any corporation doing business within this State to withhold from any of its laborers, servants or employees any part or per cent of the wages earned by such laborer, servant or employee, beyond the date of the regular pay day of said corporation, under the guise or pretext, that the amount of wages so withheld, is to be given or presented to such laborer, servant or employee as a present or gratuity from said corporation, at the expiration of any future date, on condition that the services of such laborer, servant or employee have been performed to the entire satisfaction of said corporation, or upon condition that such laborer, servant or employee shall, unless sooner discharged by said corporation, remain in

its employ until the expiration of some future date designated by said corporation, or under any other similar pretext or condition, but all such wages shall be paid in full by said corporation on its regular pay day: *Provided*, That nothing in this act contained shall be held to abridge the right of any corporation not making or requiring contracts of the class specified above, to make such contract or arrangement as may be legal, concerning the payment of wages to employees: *And provided further*, Nothing herein contained shall be construed to affect the right of any corporation to contract for the retention of a part of the wages of said laborers, servants and employees for the purpose of giving to said servants, laborers and employees insurance, hospital, sick or other similar relief.

SEC. 2. All contracts or agreements of the kind and character referred to and described in section 1 of this act, hereafter made by any corporation doing business in this State, are hereby declared to be illegal, against public policy and null and void, and no such agreement or contract shall constitute a defense upon the part of any such corporation, to any action brought by any such laborer, servant or employee, for the recovery of any wages due him, and withheld from him by any such corporation, contrary to the provisions of this act.

SEC. 3. Any such corporation doing business in this State, who shall violate the provisions of this act, shall, for each offense, forfeit the sum of two hundred dollars to be recovered from it in any [an] action of debt in the name of the people of the State of Illinois, or by any person who may sue for the same.

SEC. 4. It is hereby made the duty of the several state's attorneys of this State in their respective counties, to prosecute all actions commenced in the name of the people of the State of Illinois, under the provisions of this act.

Approved May 14, 1903.

PAGE 217.—*Exemption of wages from garnishment.*

SECTION 1. Wages earned out of this State, and payable out of this State, shall be exempt from attachment or garnishment in all cases where the cause of action arose out of this State, unless the defendant in the attachment or garnishment suit is personally served with process; and, if the writ of attachment or garnishment is not personally served on the defendant, the court, justice of the peace or police magistrate issuing the writ of attachment or garnishment, shall not entertain jurisdiction of the cause, but shall dismiss the suit at the cost of the plaintiff.

Approved May 13, 1903.

PAGE 217.—*Right of action for injuries causing death.*

SECTION 1. Section two (2) of an act entitled, "An act requiring compensation for causing death by wrongful act, neglect or default," [shall] be amended to read as follows:

SEC. 2. Every such action shall be brought by, and in the names of the personal representatives of such deceased person, and the amount recovered in every such action shall be for the exclusive benefit of the widow and next of kin of such deceased person, and shall be distributed to such widow and next of kin, in the proportion provided by law in relation to the distribution of personal property left by persons dying intestate; and in every such action, the jury may give such damages as they shall deem a fair and just compensation with reference to the pecuniary injuries resulting from such death, to the wife and next of kin of such deceased person not exceeding the sum of ten thousand dollars: *Provided*, That every such action shall be commenced within one year after the death of such person: *Provided further*, That no action shall be brought or prosecuted in this State, to recover damages for a death occurring outside of this State, and that the increase from five thousand to ten thousand dollars in the amount hereby authorized to be recovered, shall apply only, in cases when death hereafter occurs.

Approved May 13, 1903.

PAGE 250.—*Mine regulations—Doortenders.*

SECTION 1. Section nineteen (19), paragraph f, of an act entitled, "An act to revise the laws in relation to coal mines and subjects relating thereto," * * * [shall] be amended to read as follows:

SEC. 19. Trappers.] (f.) At all principal doorways, through which cars are hauled, an attendant shall be employed for the purpose of opening and closing said doors when trips of cars are passing to and from the workings. Places for shelter shall be provided at such doorways to protect the attendants from being injured by the cars

while attending to their duties: *Provided*, That in any or all mines, where doors are constructed in such a manner as to open and close automatically, attendants and places for shelter shall not be required.

Approved May 13, 1903.

PAGE 250.—*Mine regulations—Board of mine inspectors.*

SECTION 1. Section 6, [paragraph a] of an act entitled, "An act to revise the law in relation to coal mines and subjects relating thereto," * * * is hereby amended to read as follows:

(a) This board shall be composed of five members, two of whom shall be practical coal miners, one a practicing hoisting engineer, and two coal operators, one of whom shall be an expert mining engineer.

Approved May 14, 1903.

PAGE 252.—*Mine regulations—Explosives.*

SECTION 1. In all coal mines in this State, where coal is blasted, the quantity of powder used in the preparation of shots shall not in any case exceed sixty inches in coal seams five and one-half feet and over; and shall not exceed forty-eight inches in coal seams under five and one-half feet in thickness.

SEC. 2. For the purpose of determining the quantity of powder, prescribed in section one (1) of this act, to be used in the preparation of any given shot, an inch of powder shall be one lineal inch, one and one-half inches in diameter, and it shall be measured in a metallic charger not to exceed twelve inches in length and one and one-half inches in diameter.

SEC. 3. No person shall drill or shoot what is known as a "dead" hole for any part of its depth; nor tamp any drill hole with drill dust, or other combustible material.

SEC. 4. Any violation of any of the conditions or requirements of this act shall be deemed a misdemeanor, punishable by a fine of not less than ten dollars (\$10) and not exceeding one hundred dollars, (\$100), or by imprisonment in the county jail for a period not exceeding three months or both, at the discretion of the court.

Approved May 14, 1903.

PAGE 252.—*Mine regulations—Wash rooms.*

SECTION 1. Every owner or operator of a coal mine in this State shall provide and maintain a wash room at a convenient place at the top of each mine for the use of the miners and other employees of such mine; and such wash room shall be so arranged that such miners and other employees may hang therein their clothes, for the purpose of drying the same.

SEC. 2. Any mine owner or operator who shall fail or refuse to comply with the provisions of this act shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be fined not more than one hundred dollars, and shall stand committed to the county jail until such fine is fully paid.

Approved May 14, 1903.

PAGE 289.—*Protection of employees on street railways—Inclosed platforms.*

SECTION 1. Every cable, grip, electric, horse or other street car, other than trail cars, which are attached to motor cars, shall be provided during the months of November, December, January, February and March of each year, at both ends with a screen or vestibule constructed of glass or other material, which shall fully and completely protect the driver or motorman or gripman or conductor, or other persons stationed on both ends and guiding or directing the motor power by which they are propelled from wind and storm.

SEC. 2. Any person, agent, or officer of any association or corporation violating the provisions of this act shall, upon conviction, be fined in any sum not less than \$25 nor more than \$100 for each day each car belonging to and used by any such person, association or corporation is directed or permitted to remain unprovided with the screen required in section 1 of this act; and it is hereby made the duty of the prosecuting attorney of each county in this State, to institute the necessary proceedings to enforce the provisions of this act.

Approved May 11, 1903.

LEADING ARTICLES IN PAST NUMBERS OF THE BULLETIN.

- No. 1. Private and public debt in the United States, by George K. Holmes.
Employer and employee under the common law, by V. H. Olmsted and S. D. Fessenden.
- No. 2. The poor colonies of Holland, by J. Howard Gore, Ph. D.
The industrial revolution in Japan, by William Eleroy Curtis.
Notes concerning the money of the U. S. and other countries, by W. C. Hunt.
The wealth and receipts and expenses of the U. S., by W. M. Steuart.
- No. 3. Industrial communities: Coal Mining Co. of Anzin, by W. F. Willoughby.
- No. 4. Industrial communities: Coal Mining Co. of Blanz, by W. F. Willoughby.
The sweating system, by Henry White.
- No. 5. Convict labor.
Industrial communities: Krupp Iron and Steel Works, by W. F. Willoughby.
- No. 6. Industrial communities: Familistère Society of Guise, by W. F. Willoughby.
Cooperative distribution, by Edward W. Bemis, Ph. D.
- No. 7. Industrial communities: Various communities, by W. F. Willoughby.
Rates of wages paid under public and private contract, by Ethelbert Stewart.
- No. 8. Conciliation and arbitration in the boot and shoe industry, by T. A. Carroll.
Railway relief departments, by Emory R. Johnson, Ph. D.
- No. 9. The padrone system and padrone banks, by John Koren.
The Dutch Society for General Welfare, by J. Howard Gore, Ph. D.
- No. 10. Condition of the Negro in various cities.
Building and loan associations.
- No. 11. Workers at gainful occupations at censuses of 1870, 1880, and 1890, by W. C. Hunt.
Public baths in Europe, by Edward Mussey Hartwell, Ph. D., M. D.
- No. 12. The inspection of factories and workshops in the U. S., by W. F. Willoughby.
Mutual rights and duties of parents and children, guardianship, etc., under the law, by F. J. Stimson.
The municipal or cooperative restaurant of Grenoble, France, by C. O. Ward.
- No. 13. The anthracite mine laborers, by G. O. Virtue, Ph. D.
- No. 14. The Negroes of Farmville, Va.: A social study, by W. E. B. Du Bois, Ph. D.
Incomes, wages, and rents in Montreal, by Herbert Brown Ames, B. A.
- No. 15. Boarding homes and clubs for working women, by Mary S. Fergusson.
The trade-union label, by John Graham Brooks.
- No. 16. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
- No. 17. Brotherhood relief and insurance of railway employees, by E. R. Johnson, Ph. D.
The nations of Antwerp, by J. Howard Gore, Ph. D.
- No. 18. Wages in the United States and Europe, 1870 to 1898.
- No. 19. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
Mutual relief and benefit associations in the printing trade, by W. S. Waudby.
- No. 20. Condition of railway labor in Europe, by Walter E. Weyl, Ph. D.
- No. 21. Pawnbroking in Europe and the United States, by W. R. Patterson, Ph. D.
- No. 22. Benefit features of American trade unions, by Edward W. Bemis, Ph. D.
The Negro in the black belt: Some social sketches, by W. E. B. DuBois, Ph. D.
Wages in Lyon, France, 1870 to 1896.
- No. 23. Attitude of women's clubs, etc., toward social economics, by Ellen M. Henriotin.
The production of paper and pulp in the U. S. from Jan. 1 to June 30, 1898.
- No. 24. Statistics of cities.
- No. 25. Foreign labor laws: Great Britain and France, by W. F. Willoughby.
- No. 26. Protection of workmen in their employment, by Stephen D. Fessenden.
Foreign labor laws: Belgium and Switzerland, by W. F. Willoughby.
- No. 27. Wholesale prices: 1890 to 1899, by Roland P. Falkner, Ph. D.
Foreign labor laws: Germany, by W. F. Willoughby.

- No. 28. Voluntary conciliation and arbitration in Great Britain, by J. B. McPherson.
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Statistics of cities.
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Condition of railway labor in Italy, by Dr. Luigi Einaudi.
- No. 32. Accidents to labor as regulated by law in the U. S., by W. F. Willoughby.
Prices of commodities and rates of wages in Manila.
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- No. 33. Foreign labor laws: Australasia and Canada, by W. F. Willoughby.
The British conspiracy and protection of property act and its operation, by A. M. Low.
- No. 34. Labor conditions in Porto Rico, by Azel Ames, M. D.
Social economics at the Paris Exposition, by Prof. N. P. Gilman.
The workmen's compensation act of Holland.
- No. 35. Cooperative communities in the United States, by Rev. Alexander Kent.
The Negro landholder of Georgia, by W. E. B. Du Bois, Ph. D.
- No. 36. Statistics of cities.
Statistics of Honolulu, H. I.
- No. 37. Railway employees in the United States, by Samuel McCune Lindsay, Ph. D.
The Negroes of Litwalton, Va.: A social study of the "Oyster Negro," by William Taylor Thom, Ph. D.
- No. 38. Labor conditions in Mexico, by Walter E. Weyl, Ph. D.
The Negroes of Cinclare Central Factory and Calumet Plantation, La., by J. Bradford Laws.
- No. 39. Course of wholesale prices, 1890 to 1901.
- No. 40. Present condition of the hand-working and domestic industries of Germany, by Henry J. Harris, Ph. D.
Workmen's compensation acts of foreign countries, by Adna F. Weber.
- No. 41. Labor conditions in Cuba, by Victor S. Clark, Ph. D.
Beef prices, by Fred C. Croxton.
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Labor conditions in Cuba.
- No. 43. Report to the President on anthracite coal strike, by Carroll D. Wright.
- No. 44. Factory sanitation and labor protection, by C. F. W. Doehring, Ph. D.
- No. 45. Course of wholesale prices, 1890 to 1902.
- No. 46. Report of Anthracite Coal Strike Commission.
- No. 47. Report of the Commissioner of Labor on Hawaii.
- No. 48. Farm colonies of the Salvation Army, by Commander Booth Tucker.
The Negroes of Xenia, Ohio, by Richard R. Wright, jr., B. D.
- No. 49. Cost of living.
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- No. 50. Labor unions and British industry, by A. Maurice Low.
Land values and ownership in Philadelphia, by A. F. Davies.
- No. 51. Course of wholesale prices, 1890 to 1903.
The union movement among coal mine workers, by Frank Julian Warne, Ph. D.

DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE

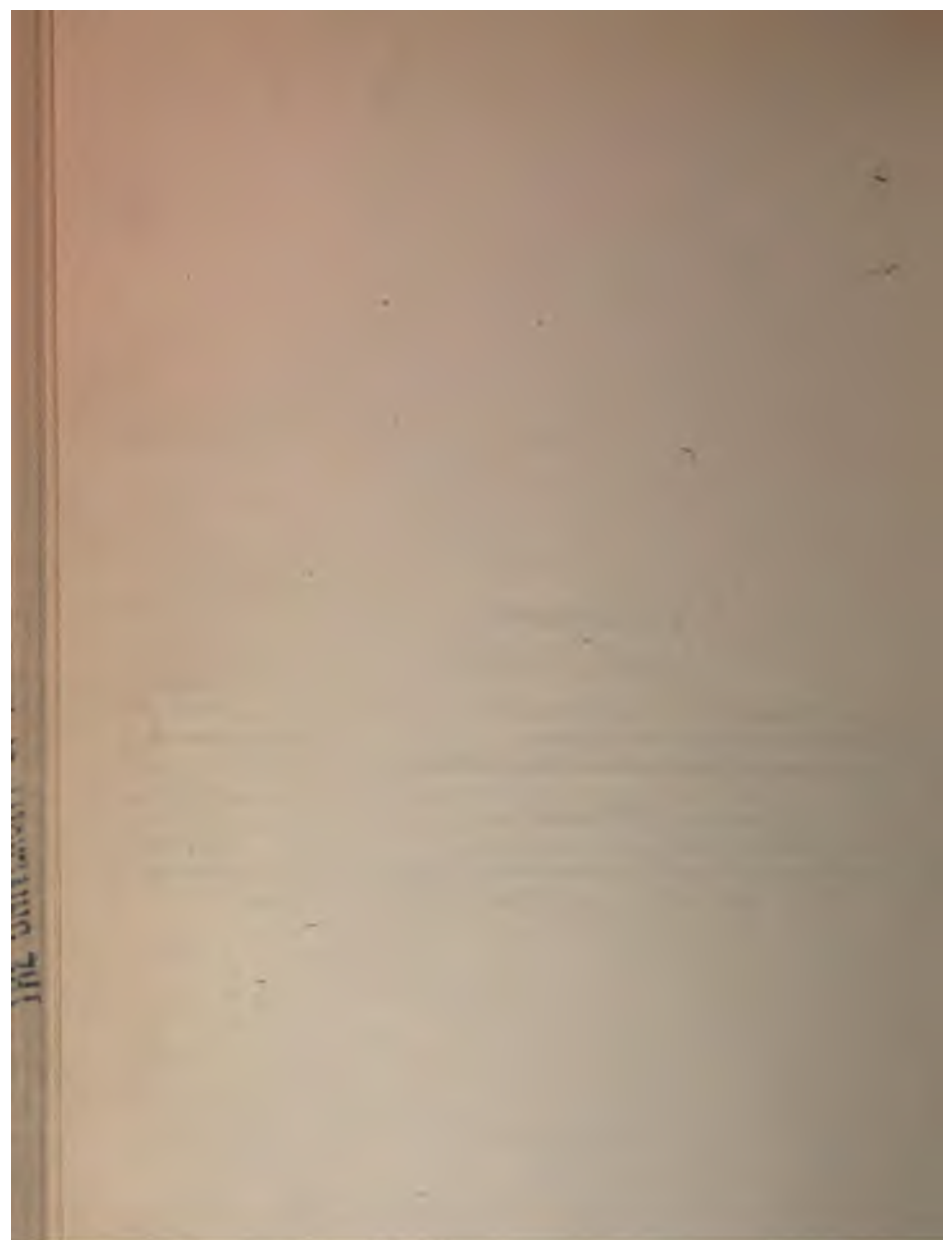
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BULLETIN
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JULY, 1904.

WAGES AND COST OF LIVING.

INTRODUCTION.

To meet the constant and growing demand on the part of the public for regular and adequate statistical information relating to wages and cost of living an extensive investigation was inaugurated in the winter of 1900-1901 by the Bureau of Labor. A number of investigations having for their purpose the collection and publication of statistics of wages and prices had been previously undertaken. These, perhaps, supplied the immediate need, but it was felt that the constant demand for current data could be met only by a very painstaking and complete investigation which would result in thoroughly representative figures for a period of years, and which would serve as the basis for the regular annual collection and presentation of data from the establishments covered. The investigation as originally planned contemplated the collection of data relating to the following subjects:

1. Cost of living, 1901.
2. Retail prices of food, 1890 to 1901.
3. Wages and hours of labor, 1890 to 1901.

The great labor involved in the collection and compilation of the data and the comparatively small force available for the work, however, protracted its completion to such an extent that the Bureau was enabled to include data for the years 1902 and 1903. The large quantity of data secured and the considerable space required for its adequate presentation rendered it necessary to devote two separate reports to the subjects covered, the results of the investigation into cost of living and retail prices forming the basis of the Eighteenth Annual Report of the Bureau, now in press, and those relating to wages and hours of

labor appearing in the forthcoming Nineteenth Annual Report. Owing to considerable delay in the completion of the work and the further delay in the publication of the reports, which will present the facts ascertained in great detail, it has been deemed desirable, as with former reports, to show briefly in the Bulletin of the Bureau the most salient and interesting results of the investigations.

The issue for November, 1903, contained a summary of the results as to cost of living and retail prices of food, the subject of the Eighteenth Annual Report, down to the end of 1902. After the close of 1903 the figures for that year became available and are included in the report. Therefore, that the results for the entire period may be available, they are reproduced here, with the results of the investigation as to wages and hours of labor. An explanation is given of the scope of the investigations and of the methods employed, and the results are here presented in the order of the publication of the reports.

COST OF LIVING AND RETAIL PRICES.

The Eighteenth Annual Report of the Bureau of Labor, the report for the year 1903, which is now in the hands of the printer, presents the results of an extended investigation into the cost of living of workingmen's families and the retail prices of the principal staple articles of food used by such families. The object of the investigation into cost of living was to determine the cost of housing, fuel, lighting, food, clothing, etc., in the ordinary family in the United States. The object of the investigation into retail prices was to determine the changes in the prices of the staple articles of food for a period of years, and thereby to determine as nearly as possible the changes in the cost of living in the several years covered.

The figures of income and expenditure furnished in detail by 2,567 families in 33 States, representing the leading industrial centers of the country, comprise the material for the detailed study of the cost of living. Certain data, which do not enter so much into detail, were collected in regard to the cost of living in 25,440 families, and the results are extensively summarized in the full report. The information relating to each family was secured directly from the husband or wife, or both, by the personal visit of a special agent of the Bureau, and the most important inquiries propounded were those relating to the earnings of the husband, the wife, and the children, and the expenditure of the family for housing, fuel, lighting, food, clothing, and other purposes during the year.

The following table shows for five geographical divisions and for the United States as a whole, the number of families investigated in detail, the average size of family, the average income per family, the average

expenditure per family for all purposes, and the average expenditure per family for food, the figures being for the year 1901:

NUMBER OF FAMILIES, AVERAGE SIZE OF FAMILY, AVERAGE INCOME PER FAMILY, AVERAGE EXPENDITURE PER FAMILY FOR ALL PURPOSES, AND AVERAGE EXPENDITURE PER FAMILY FOR FOOD, DURING THE YEAR 1901.

Geographical division.	Families.	Average size of family.	Average income per family.	Average expenditure per family for all purposes.	Average expenditure per family for food.
North Atlantic States	1, 415	5.25	\$634.83	\$778.04	\$336.10
North Central States	721	5.46	842.60	785.95	321.00
South Atlantic States	219	5.30	762.78	700.62	296.64
South Central States	122	5.65	715.46	690.11	292.68
Western States	90	4.69	891.82	751.46	308.53
United States	2, 567	5.31	\$27.19	768.54	326.90

This table shows that the 2,567 families consisted on an average of 5.31 persons, 0.7 person above the average of private families in the whole country as shown by the census of 1900. This larger size of family was not due to any intentional selection of larger families, for the only basis of selection was that the head of the family must be a wage worker or a salaried man earning not over \$1,200 during the year, and must be able to give information in regard to his expenditures in detail. The average income for the year of these 2,567 families from all sources was \$827.19. The average expenditure for all purposes was \$768.54 and the average expenditure for food was \$326.90 per family, or 42.54 per cent of the average expenditure for all purposes.

The two summaries which immediately follow are also based on the facts ascertained by the special inquiry covering 2,567 families. From these it was found possible to secure accurate data not only as to the total expenditures for food, but also as to the quantity and cost of each of the several articles consumed during the year. Data in minute detail were also secured from these families as to their expenditures for other purposes. The summary showing the average quantity and cost of the food consumed in the 2,567 families during the year follows:

AVERAGE QUANTITY AND COST PER FAMILY OF THE VARIOUS ARTICLES OF FOOD CONSUMED.

Article.	Quantity.	Cost.
Fresh beef	349.7 pounds ..	\$50.06
Salt beef	48.6 pounds ..	5.26
Fresh hog products	114.2 pounds ..	14.02
Salt hog products	110.5 pounds ..	13.89
Other meat	77.7 pounds ..	9.78
Poultry	67.7 pounds ..	9.49
Fish	79.9 pounds ..	8.01
Eggs	85.2 dozen ..	16.79
Milk	354.5 quarts ..	21.82

AVERAGE QUANTITY AND COST PER FAMILY OF THE VARIOUS ARTICLES OF FOOD
CONSUMED—Concluded.

Article.	Quantity.	Cost.
Butter	117.1 pounds ..	\$28.76
Cheese	16.0 pounds ..	2.62
Lard	84.4 pounds ..	9.35
Tea	10.6 pounds ..	5.30
Coffee	46.8 pounds ..	10.74
Sugar	268.5 pounds ..	15.76
Molasses	3.6 gallons ..	1.69
Flour and meal	680.8 pounds ..	16.76
Bread	252.7 loaves ..	12.44
Rice	25.1 pounds ..	2.05
Potatoes	14.7 bushels ..	12.93
Other vegetables		14.85
Fruit		16.52
Vinegar, pickles, and condiments		4.12
Other food		20.40
Total food		\$326.90

From the above table it is seen that the average family consumed 349.7 pounds of fresh beef during the year, and that the cost was \$50.05; the average quantity of salt beef consumed was 48.6 pounds, costing \$5.26, etc. As practically all of the family schedules were secured in the year 1901, this may be considered as showing the cost in that year. The quantity of some articles could not be given. These articles include vegetables other than potatoes, fruit, vinegar, pickles, and condiments, and other food. The average cost of all food for the 2,567 families during the year was \$326.90. The average total expenditure of these 2,567 families for all purposes as shown in the previous summary was \$768.54. The next summary shows the per cent of the total expenditure that was disbursed for the principal items entering into the cost of living:

PER CENT OF THE AVERAGE TOTAL EXPENDITURE OF 2,567 FAMILIES DISBURSED FOR
THE PRINCIPAL ITEMS ENTERING INTO THE COST OF LIVING.

Item.	Percent.	Item.	Percent.
Food	42.54	Charity	0.31
Rent	12.95	Furniture and utensils	3.42
Principal and interest on mortgage on home	1.58	Books and newspapers	1.09
Fuel	4.19	Amusements and vacation	1.00
Lighting	1.06	Intoxicating liquors	1.62
Clothing	14.04	Tobacco	1.42
Taxes	.75	Sickness and death	2.67
Insurance	2.73	Other purposes	5.87
Labor and other organization fees	1.17		100.00
Religious purposes	.99		

From this table it is seen that the expenditure for food constituted 42.54 per cent of the cost of living; that for housing, including rent and principal and interest paid on homes which were being acquired, constituted 14.53 per cent; that for clothing, 14.04 per cent, etc.

That part of the investigation which relates to retail prices is, it should be stated, the first extended investigation into retail prices covering a long series of years that has been made in this country. All previous price studies covering a period of years have dealt solely

with wholesale prices which, of course, do not represent accurately the cost to the small consumer. In their general trend retail prices follow the wholesale prices, but their fluctuations are smaller and less rapid, and this is clearly brought out in the full report.

In order to ascertain the course of retail prices of food for a series of years and the consequent changes in the cost of living as regards food, the Bureau through its agents secured from the books of 814 retail merchants, in the same localities from which data relating to family expenditures were obtained, the retail prices of the principal staple articles of food. These figures in all cases represent the actual sales to consumers and may, therefore, be considered entirely trustworthy; and covering as they do all parts of the country they may also be considered thoroughly representative. Prices were taken for each month during the fourteen years of 1890 to 1903, inclusive, which was as far back as it was practicable to go. These covered 30 distinct articles, and, under each article, various grades and descriptions of that article. From the monthly prices average yearly prices were computed, and these will be shown in detail in the forthcoming report for each locality covered. In order to show the changes from year to year relative prices or index numbers were computed. These relative prices consist of a series of percentages showing the per cent the price in each year was of the average price for the ten-year period from 1890 to 1899. This average price for the ten-year period was selected as the base because it represented the average conditions more nearly than the price in any one year which might be selected as a base for all articles. With each article represented by a percentage or index number it is possible to combine the several percentages and compute the percentage showing the relative price from year to year of all food. Several very interesting summaries from the report are here presented. The first shows the relative prices for each year from 1890 to 1903 of the staple articles of food for which the retail prices were secured:

RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, 1890 TO 1903.

[Average price for 1890-1899=100.]

Year.	Apples, evapo- rated.	Beans, dry.	Beef, fresh, roasts and stews.	Beef, fresh, steaks.	Beef, salt.	Bread, wheat.	Butter.	Cheese.	Chick- ens.	Coffee.
1890	109.0	103.3	99.5	98.8	97.5	100.3	99.2	98.8	101.3	105.4
1891	110.3	106.2	100.0	99.4	98.3	100.3	106.4	100.3	104.0	106.2
1892	99.3	102.4	99.6	99.3	99.5	100.8	106.8	101.5	103.8	103.8
1893	107.0	105.0	99.0	99.6	100.3	100.1	109.9	101.8	104.2	104.8
1894	105.8	102.8	98.3	98.2	98.9	99.9	101.7	101.6	98.6	103.3
1895	97.4	100.5	98.6	99.1	99.6	99.7	97.0	99.2	98.4	101.7
1896	88.6	92.7	99.1	99.5	99.8	99.9	92.7	97.9	97.1	99.6
1897	87.8	91.5	100.3	100.2	100.9	100.0	93.1	99.0	94.0	99.6
1898	95.4	95.9	101.7	102.0	102.1	99.8	95.1	97.5	96.8	91.1
1899	99.5	99.7	103.7	103.9	103.2	99.6	97.7	102.4	101.8	90.5
1900	85.2	110.0	106.5	106.4	103.7	99.7	101.4	103.9	100.8	91.1
1901	96.8	113.9	110.7	111.0	106.1	99.4	108.2	103.3	103.0	90.7
1902	104.4	116.8	118.6	118.5	116.0	99.4	111.5	107.3	113.2	89.6
1903	100.8	118.1	113.1	112.9	108.8	100.2	110.8	109.4	118.5	89.8

RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, 1890 TO 1903—Concluded.

[Average price for 1890-1899=100.]

Year.	Corn meal.	Eggs.	Fish, fresh.	Fish, salt.	Flour, wheat.	Lard.	Milk, fresh.	Molasses.	Mutton and lamb.	Pork, fresh.
1890.....	100.0	100.6	99.3	100.7	109.7	98.2	100.5	104.7	100.7	97.0
1891.....	109.7	106.9	99.6	101.7	112.5	99.8	100.5	101.7	106.6	98.7
1892.....	105.2	106.8	100.1	102.2	105.1	103.6	100.6	101.2	101.0	100.5
1893.....	103.1	108.1	100.1	103.4	96.1	117.9	100.4	100.6	99.9	107.0
1894.....	102.2	96.3	100.4	101.5	88.7	106.9	100.2	100.3	97.8	101.8
1895.....	100.8	99.3	99.8	98.9	89.0	100.1	100.0	99.0	98.7	99.7
1896.....	95.0	92.8	100.2	97.5	92.7	92.5	99.9	98.7	98.7	97.4
1897.....	93.7	91.4	99.8	95.2	104.8	89.8	99.7	97.7	99.6	97.6
1898.....	95.0	96.2	100.5	98.8	107.4	93.9	99.4	97.9	100.4	98.6
1899.....	95.1	101.1	100.2	100.2	94.6	97.1	98.9	98.2	102.6	101.7
1900.....	97.4	99.9	100.4	99.1	94.3	104.4	99.9	102.2	105.6	107.7
1901.....	107.1	105.7	101.4	100.9	94.4	118.1	101.1	101.3	109.0	117.9
1902.....	118.8	119.1	105.0	102.8	94.9	134.3	103.3	102.1	114.7	128.3
1903.....	120.7	125.3	107.3	108.4	101.2	126.7	105.8	103.8	112.6	127.0

Year.	Pork, salt, bacon.	Pork, salt, dry or pickled.	Pork, salt, ham.	Potatoes, Irish.	Prunes.	Rice.	Sugar.	Tea.	Veal.	Vinegar.
1890.....	95.8	95.3	98.7	109.3	116.8	101.3	118.6	100.0	98.8	102.9
1891.....	96.6	98.9	99.3	116.6	116.5	102.5	102.7	100.4	99.6	105.5
1892.....	99.1	100.5	101.9	95.7	113.5	101.3	96.2	100.2	100.0	102.7
1893.....	109.0	108.7	109.3	112.3	115.6	98.4	101.5	100.1	100.0	99.5
1894.....	103.6	103.4	101.9	102.6	100.9	99.0	93.8	98.7	98.7	99.8
1895.....	99.4	99.2	98.8	91.8	94.2	98.8	91.8	98.6	98.5	98.9
1896.....	96.7	95.5	97.6	77.0	86.8	96.7	96.6	98.8	99.5	97.2
1897.....	97.4	97.3	98.2	93.0	84.8	97.9	96.7	98.5	99.9	97.4
1898.....	100.2	99.1	95.1	105.4	86.3	101.7	101.3	100.7	101.2	97.9
1899.....	102.9	101.8	99.2	96.1	85.1	102.4	101.7	104.4	103.7	98.3
1900.....	109.7	107.7	105.3	93.5	83.0	102.4	104.9	105.5	104.9	98.5
1901.....	121.0	117.5	110.2	116.8	82.6	108.5	108.0	106.7	106.8	98.9
1902.....	135.6	132.5	119.4	117.0	83.4	103.5	96.0	107.2	115.2	99.5
1903.....	139.8	129.0	121.3	114.8	80.2	108.9	98.1	106.0	114.9	99.1

From this table it is seen that the price of fresh roasting and stewing beef in 1890 was 99.5 per cent of the average price during the ten-year period from 1890 to 1899. In 1891 the price was exactly the average price for the ten-year period—that is, 100.0. The lowest point reached was in 1894, when it was 98.3 per cent of the average price for the ten-year period. The highest point reached was in 1902, when it stood at 118.6. In 1903 it stood at 113.1, or 13.1 per cent higher than the average price for the period from 1890 to 1899. In the use of these tables showing the relative figures it should be borne in mind that the difference in the relative prices in any two years is not the per cent of difference in the cost. For example: The relative price of fresh roasting and stewing beef was 98.3 in 1894 and 113.1 in 1903. The difference in the relative prices is 14.8; and this figure being 15.1 per cent of 98.3, the per cent of increase in 1903 over 1894 is 15.1 per cent.

The next summary shows the relative prices of food, considered as a whole, for each year. The importance of the various articles or groups of articles of food in the family consumption having been determined from the expenditures of the 2,567 families referred to above, the relative prices of the several articles of food were weighted according to this importance. The result, shown in the following table, gives for 5 geographical divisions and the United States for the period

1890 to 1903 the relative retail price of the food consumed in one year by a workingman's family, compared with the average price for the ten-year period 1890 to 1899:

RELATIVE RETAIL PRICE OF FOOD, WEIGHTED ACCORDING TO THE AVERAGE FAMILY CONSUMPTION, 1890 TO 1903.

[Average price for 1890-1899 = 100.]

Year.	North Atlantic States, 1,415 families.	North Central States, 721 fam- ilies.	South Atlantic States, 219 fam- ilies.	South Central States, 122 fam- ilies.	Western States, 90 fam- ilies.	United States, 2,567 families.
1890	102.3	102.3	101.2	102.1	107.7	102.4
1891	103.2	104.5	102.1	103.6	108.7	103.8
1892	102.1	101.8	101.1	100.7	106.2	101.9
1893	104.4	105.4	103.2	103.5	102.9	104.4
1894	99.2	100.6	100.0	100.0	99.3	99.7
1895	97.7	98.0	98.7	98.1	96.7	97.8
1896	97.0	94.6	96.8	96.1	93.2	95.6
1897	96.9	95.6	97.1	97.8	92.7	93.3
1898	96.8	98.4	99.3	96.8	95.2	93.7
1899	99.6	98.9	100.5	99.9	96.5	99.5
1900	101.2	100.8	102.4	101.1	98.1	100.1
1901	104.7	106.1	106.9	106.9	99.9	105.2
1902	110.5	111.7	111.8	113.5	104.4	110.9
1903	110.1	111.0	111.2	113.5	108.7	110.3

The table shows that the lowest price of food during the period covered was in 1896, when according to the weighted relative prices it was 95.5 per cent of the average price from 1890 to 1899; and that the highest price was in 1902, when it was 110.9 per cent of the average price for the base period, or 10.9 per cent above the average price for ten years from 1890 to 1899. As stated above, these figures represent the relative prices of food when the various articles are weighted according to their importance in the family consumption, as shown by the summary on pages 705 and 706. A computation of the simple average of the relative prices of the 30 articles, however, discloses the fact that the simple unweighted average, giving to each of the articles equal importance, follows very closely the average weighted by family consumption. These simple averages are as follows: 1890, 102.1; 1891, 103.4; 1892, 101.8; 1893, 104.1; 1894, 100.3; 1895, 98.2; 1896, 95.8; 1897, 96.3; 1898, 98.5; 1899, 99.6; 1900, 101.5; 1901, 105.5; 1902, 110.9; and 1903, 110.9.

To render easy a comparison of the prices of the last year of the period, 1903, with those of each of the other years, the following table has been prepared, showing the per cent of increase or decrease in the prices of 1903 compared with the prices of each previous year of the period.

PER CENT OF INCREASE (+) OR DECREASE (−) IN RETAIL PRICES OF VARIOUS ARTICLES OF FOOD, 1903 COMPARED WITH PREVIOUS YEARS.

Article.	Per cent of increase or decrease in 1903 compared with—												
	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Apples, evaporated.	− 7.5	− 8.6	+ 1.5	− 5.8	− 4.7	+ 3.5	+ 13.8	+ 14.8	+ 5.7	+ 1.3	+ 5.9	+ 4.1	− 8.4
Beans, dry.	+ 14.3	+ 11.2	+ 15.3	+ 12.5	+ 14.9	+ 17.5	+ 27.4	+ 29.1	+ 23.1	+ 18.5	+ 7.4	+ 3.7	+ 1.1
Beef, fresh, roasts and stews.	+ 13.7	+ 13.1	+ 13.6	+ 14.2	+ 15.1	+ 14.7	+ 14.1	+ 12.8	+ 11.2	+ 9.1	+ 6.2	+ 2.2	− 4.6
Beef, fresh, steaks.	+ 14.3	+ 13.6	+ 13.7	+ 13.4	+ 15.0	+ 13.9	+ 13.5	+ 12.7	+ 10.7	+ 8.7	+ 6.1	+ 1.7	− 4.7
Beef, salt.	+ 11.6	+ 10.7	+ 9.3	+ 8.5	+ 10.0	+ 9.2	+ 9.0	+ 7.8	+ 6.6	+ 5.4	+ 4.9	+ 2.5	− 6.2
Bread, wheat.	− .1	− .1	− .1	− .1	− .3	− .5	− .8	− .2	− .4	− .6	− .5	− .8	− .8
Butter.	+ 11.7	+ 4.1	+ 3.7	+ 8	+ 8.9	+ 14.2	+ 19.5	+ 19.0	+ 16.5	+ 13.4	+ 9.3	+ 7.4	− .6
Cheese.	+ 10.7	+ 9.1	+ 7.8	+ 7.5	+ 7.7	+ 10.3	+ 11.7	+ 10.5	+ 12.2	+ 6.8	+ 5.3	+ 5.9	+ 2.0
Chickens.	+ 17.0	+ 13.9	+ 14.2	+ 13.7	+ 20.2	+ 20.4	+ 22.0	+ 26.1	+ 22.4	+ 16.4	+ 17.6	+ 15.0	+ 4.7
Coffee.	− 15.3	− 15.1	− 14.0	− 14.8	− 13.6	− 12.2	− 10.3	− 5.6	− 2.0	− 1.3	− 2.0	− 1.5	− .3
Corn meal.	+ 20.7	+ 10.0	+ 14.7	+ 17.1	+ 18.1	+ 19.7	+ 27.1	+ 28.8	+ 27.1	+ 26.9	+ 23.9	+ 12.7	+ 1.6
Eggs.	+ 24.6	+ 17.2	+ 17.3	+ 15.9	+ 30.1	+ 26.2	+ 35.0	+ 37.1	+ 30.2	+ 23.9	+ 25.4	+ 18.5	+ 5.2
Fish, fresh.	+ 8.1	+ 7.7	+ 7.2	+ 7.2	+ 6.9	+ 7.5	+ 7.1	+ 7.5	+ 6.8	+ 7.1	+ 6.9	+ 5.8	+ 2.2
Fish, salt.	+ 7.6	+ 6.6	+ 6.1	+ 4.8	+ 5.8	+ 9.6	+ 11.2	+ 13.9	+ 9.7	+ 8.2	+ 9.4	+ 7.4	+ 5.4
Flour, wheat.	− 7.7	− 10.0	− 3.7	+ 5.3	+ 14.1	+ 13.7	+ 9.2	− 3.0	− 5.8	+ 7.0	+ 7.8	+ 7.2	+ 6.6
Lard.	+ 29.0	+ 27.0	+ 22.3	+ 7.5	+ 18.5	+ 26.6	+ 37.0	+ 41.1	+ 34.9	+ 30.5	+ 21.4	+ 7.3	− 8.7
Milk, fresh.	+ 5.3	+ 5.3	+ 5.2	+ 5.4	+ 5.6	+ 5.8	+ 5.9	+ 6.1	+ 6.4	+ 7.0	+ 5.9	+ 4.6	+ 2.4
Molasses.	− .9	+ 2.1	+ 2.6	+ 3.2	+ 3.5	+ 4.8	+ 5.2	+ 6.2	+ 6.0	+ 5.7	+ 1.6	+ 2.5	+ 1.7
Mutton and lamb.	+ 11.8	+ 11.9	+ 11.5	+ 12.7	+ 15.1	+ 14.1	+ 14.1	+ 13.1	+ 12.2	+ 9.7	+ 6.6	+ 3.3	− 1.8
Pork, fresh.	+ 30.9	+ 28.7	+ 26.4	+ 18.7	+ 24.8	+ 27.4	+ 30.4	+ 30.1	+ 28.8	+ 24.9	+ 17.9	+ 7.7	− 1.0
Pork, salt, bacon.	+ 45.9	+ 44.7	+ 41.1	+ 28.3	+ 34.9	+ 40.6	+ 44.6	+ 43.5	+ 39.5	+ 35.9	+ 27.4	+ 15.5	+ 3.1
Pork, salt, dry or pickled.	+ 35.4	+ 30.4	+ 28.4	+ 18.7	+ 24.8	+ 30.0	+ 35.1	+ 32.6	+ 30.2	+ 26.7	+ 19.8	+ 9.8	− 2.6
Pork, salt ham.	+ 22.9	+ 22.2	+ 19.0	+ 11.0	+ 19.0	+ 22.8	+ 24.3	+ 23.5	+ 27.5	+ 22.3	+ 15.2	+ 10.1	+ 1.6
Potatoes, Irish.	+ 5.0	− 1.5	+ 20.0	+ 2.2	+ 11.9	+ 25.1	+ 49.1	+ 23.4	+ 8.9	+ 19.5	+ 22.8	− 1.7	− 1.9
Prunes.	− 31.3	− 31.2	− 29.3	− 30.6	− 20.5	− 14.9	− 7.6	− 4.9	− 7.1	− 5.8	− 3.4	− 2.9	− 3.8
Rice.	+ 2.6	+ 1.4	+ 2.6	+ 5.6	+ 4.9	+ 5.2	+ 7.4	+ 6.1	+ 2.2	+ 1.5	+ 1.6	+ .4	+ .4
Sugar.	− 19.0	− 6.4	− .1	− 5.3	+ 2.5	+ 4.7	− .5	+ .4	− 5.1	− 5.5	− 8.4	− 6.7	+ .1
Tea.	+ 6.0	+ 5.6	+ 5.8	+ 5.9	+ 7.4	+ 7.6	+ 7.3	+ 7.6	+ 5.3	+ 1.5	+ .5	− .7	− 1.1
Veal.	+ 16.3	+ 15.4	+ 14.9	+ 14.9	+ 16.4	+ 16.6	+ 15.5	+ 15.0	+ 13.5	+ 10.8	+ 9.5	+ 5.6	− .3
Vinegar.	− 3.7	− 6.1	− 3.5	− .4	− .7	+ .2	+ 2.0	+ 1.7	+ 1.2	+ .8	+ .6	+ .2	− .4
All food weighted according to fam- ily consumption.	+ 7.7	+ 6.3	+ 8.2	+ 5.7	+ 10.6	+ 12.8	+ 15.5	+ 14.5	+ 11.8	+ 10.9	+ 9.1	+ 4.8	− .5

In this table (+) and (−) are used to show whether the price in 1903 was higher or lower than in the year indicated at the head of the column. Thus, on the first line it is seen that evaporated apples were 7.5 per cent lower in 1903 than in 1890; on the second line, that dry beans were 14.3 per cent higher in 1903 than in 1890; on the third line, that fresh roasting and stewing beef was 13.7 per cent higher in 1903 than in 1890, etc. The last line of the table shows the per cent of increase or decrease for all food in 1903 as compared with preceding years. Giving each article a weight in proportion to its cost in family consumption, food in 1903 was 7.7 per cent higher than in 1890, 6.3 per cent higher than in 1891, etc., and 15.5 per cent higher than in 1896, the year of lowest prices of food.

If the relative prices of food given above be taken in connection with the average actual expenditure for food in 1901 of the 2,567 families investigated by the Bureau, the amount of the average expenditure for food in each year may be calculated. This has been done and the results showing for 5 geographical groups and for the United States the average cost of food per family in each year from 1890 to 1903, inclusive, are given in the following table.

AVERAGE COST OF FOOD PER FAMILY, 1890 TO 1903, BASED ON AVERAGE COST PER FAMILY IN 1901 AND THE RELATIVE RETAIL PRICES OF FOOD WEIGHTED ACCORDING TO FAMILY CONSUMPTION.

Year.	North Atlantic States, 1,415 fam- ilies.	North Central States, 721 fam- ilies.	South Atlantic States, 219 fam- ilies.	South Central States, 122 fam- ilies.	Western States, 90 families.	United States, 90 2,567 fam- ilies.
1890.....	\$330.35	\$310.08	\$282.72	\$279.54	\$332.61	\$318.20
1891.....	333.26	316.75	285.23	283.64	335.72	322.55
1892.....	329.70	308.57	282.44	275.71	324.90	316.65
1893.....	337.13	319.48	288.80	283.37	317.80	324.41
1894.....	320.34	304.93	278.86	273.79	306.68	309.81
1895.....	315.50	297.05	275.73	268.59	298.65	303.91
1896.....	313.23	286.74	270.42	263.11	287.84	296.76
1897.....	312.91	289.77	271.26	266.40	286.29	299.24
1898.....	319.05	298.26	277.41	270.50	294.01	306.70
1899.....	321.31	299.78	280.76	273.51	304.21	309.19
1900.....	326.80	305.54	286.07	276.80	302.97	314.16
1901.....	338.10	321.60	298.54	292.68	308.53	326.90
1902.....	356.83	338.57	312.83	310.75	322.43	344.61
1903.....	355.54	336.45	310.65	310.75	320.27	342.75

From this table it will be seen that the average cost of food per family in 1890 was \$318.20. In 1896, the year of lowest prices, it fell to \$296.76; in 1902 it reached the highest point of the period, being \$344.61; while in 1903 it fell slightly, to \$342.75. The changes in the cost of living, as shown by the results of this investigation, relate to food alone, representing 42.54 per cent of all family expenditures in the 2,567 families furnishing information.

Of the remaining articles, constituting 57.46 per cent of the family expenditure, certain ones are, from their nature, affected only indirectly and in very slight degree by any rise or fall in prices. Such are payments on account of principal and interest of mortgage, taxes, property and life insurance, labor and other organization fees, religion, charity, books and newspapers, amusements and vacation, intoxicating liquors, and sickness and death. These together constituted 14.51 per cent of the family expenditure in 1901 of the 2,567 families investigated. Miscellaneous purposes, not reported, for which, from their very character, no prices are obtainable, made up 5.87 per cent, and rent, for which also no prices for the several years are available, made up 12.95 per cent.

The remaining classes of family expenditure, 24.13 per cent of all, consist of clothing 14.04 per cent, fuel and lighting 5.25 per cent, furniture and utensils 3.42 per cent, and tobacco 1.42 per cent. For these no retail prices covering a series of years are available, but it is probable that the advance of the retail prices was considerably less than the advance in wholesale prices, as the advance in the wholesale prices of 25 articles of food in 1903, as compared with 1896, was 27.9 per cent, while the advance in the retail prices of 25 similar articles or groups of articles, as shown by the results of this investigation, was but 15.3 per cent. An examination of the relative wholesale prices of these

classes of articles in Bulletin No. 51, giving them their proper weight according to family consumption, leads to the conclusion that the advance in the retail prices of these articles as a whole, comparing 1903 with the year of lowest prices, could have been but little, if at all, greater than the advance in the retail price of food.

If all classes of family expenditures as above be taken into consideration, it is apparently a safe and conservative conclusion, therefore, that the increase in the cost of living, as a whole, in 1903, when compared with the year of lowest prices, was less than 15.5 per cent, the figure given above as the increase in the cost of food as shown by this investigation. This assumes, of course, always the purchase of the same articles and the same quantities in years of low prices, low wages, and more or less irregular employment, and in years of higher prices, higher wages, and steady employment.

WAGES AND HOURS OF LABOR.

The Nineteenth Annual Report of the Bureau of Labor, the report for the year 1904, will present the results of an extensive investigation into the wages and hours of labor in the leading manufacturing and mechanical industries of the United States during the period from 1890 to 1903, inclusive. The investigation was designed to cover thoroughly the principal distinctive occupations in the leading industries belonging to this large industrial group in all sections of the country, with a view to securing data which should be entirely representative of conditions and show the trend of wages and hours of labor during the period covered. It is to be regretted that the force available for the prosecution of the work did not permit of the extension of the investigation to cover transportation, mining, agriculture,^(a) and the other great industrial groups. It is believed, however, that the data

"The 'Wages of Farm Labor in the United States' is the title of a recent bulletin of the U. S. Department of Agriculture. From this the following table showing wages of farm laborers is drawn:

AVERAGE WAGES OF FARM LABORERS IN THE UNITED STATES IN CERTAIN YEARS
FROM 1890 TO 1902.

[From bulletin of the U. S. Department of Agriculture, "Wages of Farm Labor in the United States,"]

Year.	Per month.		Per day of ordinary labor.		Per day in harvest.	
	Without board.	With board.	Without board.	With board.	Without board.	With board.
1890	\$14.33	\$12.45	\$0.92	\$0.68	\$1.30	\$1.02
1892	18.60	12.54	.92	.67	1.30	1.02
1893	19.10	13.29	.89	.69	1.24	1.03
1894	17.74	12.16	.81	.63	1.13	.93
1895	17.69	12.02	.81	.62	1.14	.92
1898	19.38	13.43	.96	.72	1.30	1.06
1899	20.23	14.07	1.01	.77	1.37	1.12
1902	22.14	16.49	1.13	.89	1.53	1.34

presented are more comprehensive and representative, so far as the manufacturing and mechanical industries are concerned, than any that have been heretofore published. It is believed also that the figures forming the basis of the report are in all particulars thoroughly accurate and trustworthy, inasmuch as they have been secured in all cases by personal visits of the special agents of the Bureau to the several establishments represented and have been drawn directly from the pay rolls and other records in existence and available for reference. The preservation of records of this character for any considerable period of years is not usual, and great difficulty was experienced in finding establishments in some industries which had been in existence since 1890 and had preserved their pay rolls and other records of transactions with their employees. In a few cases, indeed, the agents of the Bureau were compelled to accept data for less than the full period covered by the investigation in order to avoid the exclusion of some important occupation or industry from the report—data for the full period not being available—while in other cases the Bureau was compelled to accept data for less than the full period in order to secure the adequate representation of some important section of the country in certain industries in the report. An examination of the table by industries and occupations (Table I) shows that all occupations usually pertaining to the various industries are not covered. As has been previously mentioned, this is in accordance with the plan adopted to secure data for only the important and distinctive occupations which are considered representative of each industry. This plan resulted in a great saving of time in the collection of the data without materially affecting its representative character. Quite often it was not possible to secure data for all of the important and distinctive occupations in a particular establishment owing to imperfect records, and for this reason, also, data from the same number of establishments are not reported for each of the occupations. In all such cases the data available were taken. Finally, it should be stated that the data in all cases were taken from that portion of each year's pay rolls most nearly representing the average conditions in the establishment during each year.

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The following table shows the industries covered by the report, the number of establishments in each industry from which data were secured, and the number of different occupations covered in each industry:

INDUSTRIES, NUMBER OF OCCUPATIONS, AND NUMBER OF ESTABLISHMENTS FROM WHICH REPORTS WERE SECURED.

Industry.	Number of occupations.	Number of establishments.	Industry.	Number of occupations.	Number of establishments.
Agricultural implements..	8	18	Iron and steel, rails	7	6
Bakery, bread	4	124	Leather	10	38
Blacksmithing and horse-shoeing	5	193	Liquors, distilled	10	4
Boots and shoes	10	46	Liquors, malt	8	55
Boots and shoes, rubber ..	6	2	Lithographing	3	5
Boxes, paper	11	6	Lumber	12	40
Brick	6	28	Marble and stone work ..	12	182
Building trades	19	1,199	Musical instruments, organs	8	3
Butter and cheese	2	29	Musical instruments, pianos	12	5
Candy	2	7	Oil, cotton seed	5	2
Carpets	8	8	Oil, linseed	6	2
Carriages and wagons	8	104	Paints	3	4
Cars, steam railroad	16	49	Paper and wood pulp	16	20
Clothing, factory product ..	7	14	Petroleum refining	8	3
Clothing, men's, custom work	4	46	Planing mill	9	94
Cooperage	11	17	Pottery	8	6
Cotton goods	6	26	Printing and publishing, book and job	10	108
Dyeing, finishing, and printing textiles	6	14	Printing and publishing, newspaper	4	132
Electrical apparatus and supplies	4	4	Rope and twine	7	2
Flour	5	34	Shipbuilding	17	38
Foundry and machine shop	10	342	Silk goods	12	13
Fruits and vegetables, canning and preserving	2	2	Slaughtering and meat packing	15	7
Furniture	9	59	Soap	6	3
Gas	4	7	Stoves	3	8
Glass, bottle and window ..	14	12	Streets and sewers, contract work	1	36
Glass, plate	9	2	Streets and sewers, municipal work	1	48
Harness	6	30	Sugar refining	9	2
Hats, fur	14	8	Tin plate	7	1
Hosiery and knit goods	7	8	Tobacco, cigars	4	3
Iron and steel, bar iron	6	16	Tobacco, plug, fine cut, and granulated smoking ..	7	17
Iron and steel, Bessemer converting	6	9	Woolen and worsted goods ..	9	16
Iron and steel, blast furnace	5	19			
Iron and steel, blooming mill	7	8			
Iron and steel, muck bar	6	15			
Iron and steel, open-hearth steel	5	10			
			Total	519	3,429

This table shows that practically all of the leading manufacturing and mechanical industries are represented in the report. The number of industries is seen to be 67, while data were secured from a total of 519 distinctive occupations in 3,429 establishments.

Table I is a summary of the full report in which the data will be presented in great detail. In it are combined for each occupation all the data that were secured for that occupation. To illustrate the method of presentation the reader is referred to the table (page 731.) The first industry shown is that of agricultural implements, and the first occupation in that industry is blacksmiths. All of these blacksmiths are males. The prefatory note states that the data secured from 15 establishments are here combined. Passing the first line of the table

for the present, the second line shows that a total of 114 men were ordinarily employed in 1890 in this occupation in the establishments covered. In the year 1891 there were 115 men employed at the representative time of the year for which the schedules were taken; the numbers employed in each of the other years are likewise shown. To make the study of the table easier a relative number has been computed to accompany each actual number. All comparisons might be made with 1890 or any other year, but owing to the fact that the conditions in any one year might be abnormal it was determined, as in the case of retail prices, to take as a base for comparison, or 100.0, not any one year, but the average for the ten years from 1890 to 1899. On the first line, therefore, appears the number 126, which is the average number employed during the ten-year period from 1890 to 1899. In the second column is the relative number 100.0, indicating that the number 126 is taken as the base, or 100.0. In the second line, showing the number of employees in 1890, is given the relative number 90.5, indicating that in 1890 the number of employees in the several establishments was 90.5 per cent of the average number employed during the ten-year period from 1890 to 1899.

The next two columns show conditions in 1903 (the last year of the period), as compared with the average condition for the ten-year period and the condition in each of the thirteen years preceding 1903. The sign (+) or (—) indicates whether the number employed in 1903 was greater or less than the number employed in the year with which the comparison is made. Thus the number of blacksmiths in these 15 establishments covered was 16 more in 1903 than the average number employed during the ten-year base period, which, according to the next column, was 12.7 per cent more. When 1903 is compared with 1890, it is seen that there were 28 more employees in 1903 than in 1890, or, as the next column shows, 24.6 per cent more. With this explanation that part of the table referring to employees will be readily understood. It may be well in this connection, however, to repeat the caution previously given as to the use of relative figures. The difference between the relative numbers in any two years is not the per cent of difference between those relative numbers. For example, the relative number of blacksmiths in the agricultural-implement industry in 1895 was 96.0, the relative number in 1901 was 114.3, and the difference in the relative numbers is 18.3. The per cent of increase in the number of employees, however, from 1895 to 1901 is found by computation to be 19.1 per cent.

The next section of the table relates to hours of labor per week. The average number of hours shown is the true average for all employees. Taking, for example, the year 1890, a total was made of the hours worked per week by the 114 men, and this total divided by

114, the number of men, gives an average per week of 59.69 hours. Relative hours of work per week have also been computed for the assistance of the reader. The third column of this section shows the increase or decrease of hours in 1903 as compared with the preceding years, and the next column the per cent of increase or decrease in hours in 1903 as compared with the preceding years.

The third section of the table relates to rates of wages per hour. Employees are either time workers or piece workers. Time workers are paid by the hour, day, week, month, or year. The piece rate of piece workers would convey little information to the general reader. For this reason the time worked to secure the earnings shown on the pay roll has been secured in the case of all piece workers and the hourly earnings computed. All wages are here shown by the hour in order that the data may be thoroughly and fairly comparable. The working day is an uncertain unit, as the time actually worked may have been long or short, and the week, month, or the year is still more indefinite. Hence all wages, however shown on the pay rolls, have been reduced to the one definite standard—the rate per hour. The true average has been computed for the wages in the same manner as has been explained concerning hours per week. The relative hourly rate of wages in each year, the actual increase or decrease in wages in 1903 compared with preceding years, and the per cent of increase or decrease in wages in 1903 compared with preceding years, are shown in the columns following the actual wages per hour.

In studying Table I the reader will observe that for a comparatively small number of occupations no figures are shown for the early years of the period, as has been previously mentioned. It is because no data could be obtained for those years, and the occupation was deemed so important that it was believed the obtainable data, though incomplete, should be shown. No relative numbers have been computed for such occupations because the facts for a part of the base period are not known. It will be observed also that data have been included for a number of establishments for which figures could not be secured for the whole period. This course was pursued only in cases where the inclusion of such establishments did not materially affect the averages shown for the establishments for which data covering the entire period were obtained. It should be stated, also, that such data were included mainly to secure the representation of an industry from a section of the country not already represented by data for the entire period. Though these short-period establishments included did not affect the average hours and wages, their employees could not be combined with the employees in the other establishments without destroying the ratio of the number employed in the several years. For this reason the number of employees shown is always the

number employed in the establishments that were in operation during each year of the period.

The relative figures shown in Table I have been summarized so as to show conditions in each industry as a whole, and are presented in this Bulletin as Table II. This summary table shows the relative conditions in each year compared with the ten-year period 1890-1899. Like the general table, it embraces three divisions, the first relating to the number of employees in the several years, the second to the hours of work per week, and the third to the wages per hour. Each of these divisions is subdivided into two columns, one showing the relative number and the other the per cent of increase or decrease in 1903, the last year of the period, compared with each of the preceding years. The base on which the relative number is computed is the average for the ten-year period, 1890-1899. Referring, now, to the table it is seen that in 1890 the number of employees engaged in the agricultural-implement industry was 86.2 per cent of the average number employed during the ten-year period. In each of the years thereafter a greater number was employed than in 1890, the highest being in 1900, when 30.7 per cent more persons were employed in the occupations and establishments covered than during the base period. In 1903 the number employed was 24.8 per cent more than the average number employed in the ten-year base period. The next column shows that the number of persons employed in 1903 was 44.8 per cent more than the number employed in 1890, 41.5 per cent more than in 1891, etc. With this explanation the other divisions of the table relating to hours per week and wages per hour will be readily understood.

In Table II the facts relating to the several occupations in each industry have been consolidated so as to form an index for each industry as a whole. In the short table immediately following the facts relating to the several industries have been combined to form a general index of all industries.

COURSE OF WAGES AND HOURS OF LABOR, 1890 TO 1903, WHEN WEIGHTED ACCORDING TO AGGREGATE WAGES PAID IN EACH INDUSTRY AS REPORTED BY THE CENSUS OF 1900.

[Relative numbers computed on basis of average for 1890-1899=100.]

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	94.9	+33.2	100.7	-4.1	100.3	+16.0
1891	97.4	+29.8	100.5	-3.9	100.2	+16.1
1892	99.1	+27.5	100.5	-3.9	100.8	+15.4
1893	99.2	+27.4	100.3	-3.7	100.9	+15.3
1894	94.1	+34.3	99.8	-3.2	97.9	+18.8
1895	96.3	+31.3	100.1	-3.5	98.3	+18.3
1896	98.3	+28.6	99.8	-3.2	99.7	+16.6
1897	100.9	+25.3	99.6	-3.0	99.6	+16.8
1898	106.3	+18.9	99.7	-3.1	100.3	+16.0
1899	110.8	+14.1	99.2	-2.6	102.0	+14.0
1900	115.5	+9.4	98.7	-2.1	105.5	+10.2
1901	119.1	+6.1	98.1	-1.5	108.0	+7.7
1902	123.6	+2.3	97.3	-.7	112.3	+3.6
1903	126.4	(a)	96.6	(a)	116.3	(a)

^a The figures in this column give opposite each year the per cent of increase or decrease (indicated by + or -) which the 1903 figures show as compared with the year specified. Thus, opposite the year 1890, under employees, appears +33.2; this shows that the per cent of increase in the number of employees in 1903 as compared with 1890 was 33.2; opposite 1890, under hours per week, appears -4.1; this shows that the per cent of decrease in the hours of labor per week in 1903 as compared with 1890 was 4.1; in like manner, under wages per hour, appears +16.0; this shows that the per cent of increase in the wages per hour in 1903 as compared with 1890 was 16.0. The figures opposite each year should be read in like manner. Opposite the year 1903, of course, no figures can be placed.

The first column of the table shows the relative number of persons employed in all of the establishments investigated that were in operation during each year of the period. This column probably does not show the full extent of the changes that have taken place in the industries of the United States during the period covered; as just stated, it measures only the changes that have taken place in those establishments that were in operation each year of the period. No figures are known to exist showing the decrease in the number of employees caused by the shutting down of establishments for one or more years of the period, or by the permanent closing of establishments. Neither are there any figures showing the increase in the number of wage-workers caused by the opening of new establishments during these years. The figures in this table relating to employees are of great value, however, for they show the changes that have taken place in a large number of establishments, and undoubtedly indicate to some extent the changes that have taken place in the number of persons employed in all industries throughout the country. The table shows that the lowest number employed was in the year 1894, when 94.1 per cent as many persons were employed as during the average period from 1890 to 1899. The highest point reached in the period covered was in 1903, when 26.4 per cent more persons were employed than the average for the ten-year base period. The next column shows the per cent of increase or decrease in the number of persons employed

in 1903 as compared with preceding years. Thus in 1903 there were employed 33.2 per cent more persons than in 1890, 34.3 per cent more than in 1894, and 2.3 per cent more than in 1902, etc. So far as these establishments are concerned it is seen that the number of employees engaged therein have gradually increased since the year 1894. It is seen that in the last year of the period, 1903, a greater number of workmen were employed than in any previous year, and in this last year the number employed was 34.3 per cent greater than in 1894, or more than one-third more.

The next section of the table relates to the hours of labor. The relative number shown is a comparison of the hours of work per week in each year with the average hours worked per week during the ten-year period from 1890 to 1899. In 1890 the hours of work per week were 0.7 per cent more than the average hours worked during the ten-year base period, while in 1903 the hours of work were but 96.6 per cent of the average for the base period; that is, 3.4 per cent less than the average hours worked during the period from 1890 to 1899. The next column shows the per cent of increase or decrease of hours per week in 1903 when compared with previous years; thus in 1903 the hours of work were 4.1 per cent less than in 1890, and 0.7 per cent less than in 1902. The tendency toward a gradual reduction of the hours of labor of the workman is clearly shown here.

The third section of the table relates to the wages per hour paid in all of the industries covered by the report. In 1890 wages were 0.3 per cent higher than the average wages paid during the ten years from 1890 to 1899. In 1891 they were 0.2 per cent higher. The lowest point reached was in 1894, when wages were 97.9 per cent of the average wages for the ten-year period; or, in other words, 2.1 per cent lower than the average for the ten-year period. From 1894 the movement has been gradually upward to 1903, when the average wages per hour were 116.3 per cent of the average for the base period; or, in other words, 16.3 per cent higher than the average wages per hour during the ten-year period, 1890 to 1899. The caution before given is here repeated. The per cent of change between one year and another is not the result of the subtraction of the two relative numbers. For example: The relative wages in all industries was 97.9 in 1894 and 116.3 in 1903; the difference between these relative numbers is 18.4. The per cent of increase in wages, however, from 1894 to 1903 was not 18.4. This difference, 18.4, is 18.8 per cent of 97.9, the number with which the comparison was made, making wages per hour in 1903 18.8 per cent higher than wages per hour in 1894. The column following the relative wages shows the per cent of increase or decrease in the average wages per hour in 1903 as compared with the preceding years. In this column it is seen that wages per hour in

1903 were 16.0 per cent higher than in 1890, 15.4 per cent higher than in 1892, 18.8 per cent higher than in 1894, 3.6 per cent higher than in 1902, etc.

In computing the figures for the table on page 718, each industry has been given a weight in proportion to the amount of wages paid therein, as shown by the United States Census of 1900. This was deemed to be the most equitable method of making allowance for the greater or less importance of the several industries. The agricultural-implement industry is an important industry, but by no means as great as the building industry of the country, therefore allowance for the importance was deemed necessary, and the most satisfactory method of weighting is believed to be the weighting in proportion to the wages paid in the several industries. In order to see what difference, if any, there would be in the results obtained by the method adopted for the computation of the relative number or index for all industries and by other methods, the relative numbers for wages were computed by three other methods. By giving all occupations an equal weight the relative number was found to be 100.2 in 1890, 100.3 in 1891, 100.6 in 1892, 100.5 in 1893, 97.9 in 1894, 98.8 in 1895, 99.6 in 1896, 99.5 in 1897, 100.1 in 1898, 101.9 in 1899, 104.9 in 1900, 107.2 in 1901, 111.2 in 1902, and 114.9 in 1903. By giving each industry an equal weight the relative number was 100.5 in 1890, 100.4 in 1891, 100.7 in 1892, 100.4 in 1893, 98.0 in 1894, 98.7 in 1895, 99.6 in 1896, 99.3 in 1897, 100.2 in 1898, 102.1 in 1899, 105.1 in 1900, 107.7 in 1901, 111.6 in 1902, and 114.7 in 1903. The third method was by giving each industry a weight in proportion to the number of employees engaged in the industry, as shown by the Census of 1900. Computed by this method the relative number was 100.4 in 1890, 100.2 in 1891, 100.7 in 1892, 100.9 in 1893, 97.9 in 1894, 98.4 in 1895, 99.9 in 1896, 99.6 in 1897, 100.3 in 1898, 101.8 in 1899, 105.4 in 1900, 107.9 in 1901, 111.9 in 1902, and 116.0 in 1903. In several of the industries, however, the number of employees varies considerably during the year in accordance with seasonal trade conditions. For this and other reasons it is believed that the number of employees does not measure the importance of the industry as fairly as do the wages paid. A comparison of the figures obtained by the three methods just described with the figures by weighting each industry in proportion to the wages paid in it shows how nearly the different methods produce the same results. Any one of the three other methods might very safely and properly be used, were no method more satisfactory available.

In studying the several tables thus far presented, the reader should bear in mind that the wages shown are the average rates of wages per hour and the hours shown the average number of hours worked per week. A reduction in hours in any year, therefore, implies a reduction of weekly earnings, unless accompanied by a corresponding increase

in the rates of wages per hour. In order to show the changes in weekly earnings that have taken place from year to year during the period, in all industries as a whole, the following table has been prepared:

RELATIVE WEEKLY EARNINGS PER EMPLOYEE AND FOR ALL EMPLOYEES, 1890 TO 1903.
[Relative numbers computed on basis of average for 1890-1899=100.]

Year.	Weekly earnings per employee.		Weekly earnings of all employees.	
	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	101.0	+11.2	95.8	+48.1
1891.....	100.7	+11.5	98.1	+44.6
1892.....	101.3	+10.9	100.4	+41.3
1893.....	101.2	+11.0	100.4	+41.3
1894.....	97.7	+14.9	91.9	+54.4
1895.....	98.4	+14.1	94.8	+49.7
1896.....	99.5	+12.9	97.8	+46.1
1897.....	99.2	+13.2	100.1	+41.8
1898.....	100.0	+12.3	106.3	+33.5
1899.....	101.2	+11.0	112.1	+26.6
1900.....	104.1	+ 7.9	120.2	+18.1
1901.....	105.9	+ 6.0	126.1	+12.5
1902.....	109.3	+ 2.7	135.1	+ 5.0
1903.....	112.3	.....	141.9	.....

The first section of the table relates to the weekly earnings of the individual employee. From this table it is seen that the weekly earnings per employee in 1890 were 1.0 per cent higher than the average weekly earnings for the ten-year period, 1890 to 1899. In 1894 the average weekly earnings were 2.3 per cent lower than the average for the ten-year period, and in 1903 they were 12.3 per cent higher. The next column shows that the weekly earnings per employee in 1903 were 11.2 per cent higher than in 1890, 11.5 per cent higher than in 1891, 14.9 per cent higher than in 1894, and 2.7 per cent higher than in 1902, etc.

The second section of the table, relating to the aggregate weekly earnings of all employees engaged in the occupations covered in the establishments included in the report, which were in operation during each year of the period, is of great interest as indicating to some extent the considerable and steady increase during the years from 1894 to 1903 in the amount paid out in wages by the manufacturing and mechanical establishments of the country. While the figures given show that this increase has been very great it is believed that they do not mark the extreme increase that would be shown were figures available for the entire number of employees in all industries, for reasons previously stated on page 718. Bearing this fact in mind the table shows that the weekly earnings of the employees engaged in the occupations covered in the establishments running during each year of the period were, in 1890, 95.8 per cent of the average for the ten-year period from 1890 to 1899; in the year 1891 they were 98.1 per cent; in 1894 they were 91.9 per cent; in 1903 the relative figure was 135.1.

while in 1903 it was 141.9, or 41.9 per cent more than the average for the ten-year period. The next column of the table, comparing the last year of the period with each of the other years, indicates that in 1903 the aggregate weekly earnings of all employees were 48.1 per cent more than in the year 1890, 54.4 per cent more than in 1894, and 5.0 per cent more than in 1902, etc.

Thus it is seen that, considering the employees covered by this report, the average weekly earnings per employee in 1903 were 12.3 per cent higher than the average for the ten-year period 1890 to 1899, and that the aggregate weekly wages paid out to all employees in 1903 were 41.9 per cent more than the average weekly wages for the same ten-year period.

An examination of the figures of the two reports shows that the price of food in 1903 was 15.5 per cent above its lowest price in 1896, the year of lowest prices; that cost of living as a whole advanced probably somewhat less; that rates of wages per hour in 1903 had increased 18.8 per cent as compared with 1894, the year of lowest wages; that hours of labor in 1903 had decreased 4.1 per cent as compared with 1890; that weekly earnings had advanced 14.9 per cent in 1903 above the weekly earnings of 1894; that 34.3 per cent more persons were employed in 1903 than in 1894, and that 54.4 per cent more money was paid out in wages per week in 1903 than in 1894.

In the discussion of the several tables of this Bulletin references have been made to the extent of change from the lowest figures shown in the several tables to the figures of 1903. This brings out the full extent of the changes that have taken place in the several years of the period, but in studying the tables for cost of living and rates of wages together, however, comparisons should always be made for the same year; that is, the relative figures for any year in one table should be compared with the relative figures for the same year in another table.

The following table shows for each of the principal features covered by the triple investigation the relative figures for each year as compared with the average for the ten-year period from 1890 to 1899, and there has been added the purchasing power of the hourly wages and of the weekly earnings per employee, measured by retail prices of food. In regard to the purchasing power of hourly wages a word of explanation should be added. According to the table, relative average wages per hour for the base period 1890-1899 were 100, and in 1890 were 100.3; relative average retail prices of food, which for the period 1890-1899 were 100, in 1890 were 102.4. As with the slight advance in wages there was a greater advance in retail prices of food (compared with the base period 1890-1899), it is evident that the purchasing power of the hourly wage was less in 1890 than for the average of 1890-1899, and this the table shows, the figures being 97.9, a decline of 2.1 per cent. Again, taking 1903, it is seen that hourly wages were

16.3 per cent above the average of 1890-1899, while retail prices of food were 10.3, making the increase in purchasing power of the hourly wage 5.4 per cent. The purchasing power of weekly earnings per employee may be read in the same way.

RELATIVE EMPLOYEES, HOURS PER WEEK, WAGES PER HOUR, WEEKLY EARNINGS PER EMPLOYEE AND OF ALL EMPLOYEES, RETAIL PRICES OF FOOD, AND PURCHASING POWER OF HOURLY WAGES AND OF WEEKLY EARNINGS PER EMPLOYEE, MEASURED BY RETAIL PRICES OF FOOD, 1890 TO 1903.

[Average of 1890-1899=100.]

Year.	Employees.	Hours per week.	Wages per hour.	Weekly earnings per employee.	Weekly earnings of all employees.	Retail prices of food.	Purchasing power, measured by retail prices of food, of—	
							Hourly wages	Weekly earnings per employee.
1890	94.9	100.7	100.3	101.0	95.8	102.4	97.9	98.6
1891	97.4	100.5	100.2	100.7	98.1	103.8	96.5	97.0
1892	99.1	100.5	100.8	101.3	100.4	101.9	98.9	99.4
1893	99.2	100.3	100.9	101.2	100.4	104.4	96.6	96.9
1894	94.1	99.8	97.9	97.7	91.9	99.7	98.2	96.0
1895	96.3	100.1	98.3	98.4	94.8	97.8	100.5	100.6
1896	98.3	99.8	99.7	99.5	97.8	95.5	104.4	104.2
1897	100.9	99.6	99.6	99.2	100.1	96.3	103.4	103.0
1898	106.3	99.7	100.3	100.0	106.3	98.7	101.6	101.3
1899	110.8	99.2	102.0	101.2	112.1	99.5	102.5	101.7
1900	115.5	98.7	105.5	104.1	120.2	101.1	104.4	108.0
1901	119.1	98.1	108.0	105.9	126.1	105.2	102.7	100.7
1902	123.6	97.3	112.3	109.3	135.1	110.9	101.3	96.6
1903	126.4	96.6	116.3	112.3	141.9	110.3	105.4	101.8

The per cent of increase or decrease in 1903, the last year of the period, as compared with the base period 1890-1899, and with each of the other years covered, is shown in the following table:

PER CENT OF INCREASE (+) OR DECREASE (-) IN 1903, AS COMPARED WITH PREVIOUS YEARS, IN EMPLOYEES, HOURS PER WEEK, WAGES PER HOUR, WEEKLY EARNINGS PER EMPLOYEE AND OF ALL EMPLOYEES, RETAIL PRICES OF FOOD, AND PURCHASING POWER OF HOURLY WAGES AND OF WEEKLY EARNINGS PER EMPLOYEE, MEASURED BY RETAIL PRICES OF FOOD, 1890 TO 1903.

Year.	Per cent of increase (+) or decrease (-) in 1903, as compared with previous years.						Purchasing power, measured by retail prices of food, of—	
	Employees.	Hours per week.	Wages per hour.	Weekly earnings per employee.	Weekly earnings of all employees.	Retail prices of food.	Hourly wages.	Weekly earnings per employee.
Average 1890-99.	+26.4	-3.4	+16.3	+12.3	+41.9	+10.3	+5.4	+1.8
1890	+33.2	-4.1	+16.0	+11.2	+48.1	+7.7	+7.7	+3.2
1891	+29.8	-3.9	+16.1	+11.5	+44.6	+6.3	+9.2	+4.9
1892	+27.5	-3.9	+15.4	+10.9	+41.3	+8.2	+6.6	+2.4
1893	+27.4	-3.7	+15.3	+11.0	+41.3	+5.7	+9.1	+5.1
1894	+34.3	-3.2	+18.8	+14.9	+54.4	+10.6	+7.3	+3.9
1895	+31.3	-3.5	+18.3	+14.1	+49.7	+12.8	+4.9	+1.2
1896	+28.6	-3.2	+16.6	+12.9	+45.1	+15.6	+1.0	-2.3
1897	+25.3	-3.0	+16.8	+13.2	+41.8	+14.5	+1.9	-1.2
1898	+18.9	-3.1	+16.0	+12.8	+33.5	+11.8	+3.7	+ .5
1899	+14.1	-2.6	+14.0	+11.0	+26.6	+10.9	+2.8	+ .1
1900	+9.4	-2.1	+10.2	+7.9	+18.1	+9.1	+1.0	-1.2
1901	+6.1	-1.5	+7.7	+6.0	+12.5	+4.8	+2.6	+1.1
1902	+2.3	-.7	+3.6	+2.7	+5.0	-.5	+4.0	+3.2

RATES OF WAGES AND HOURS OF LABOR IN THE UNITED STATES AND IN EUROPE.

In order that figures might be available, in connection with the report on wages, for a fair comparison between wages and hours of labor in the United States and the important foreign manufacturing countries, the Bureau, in the fall of 1903, made an investigation of wages and hours of labor in a few important and clearly defined occupations in Great Britain, Germany, France, and Belgium. According to the usual practice of the Bureau, the data were secured by its own agents from the pay rolls of representative establishments. Only thirteen occupations were covered, but these are enough, it is believed, to show the difference generally between rates of wages and hours of labor in the United States and in Europe. The wages and hours of labor in the thirteen occupations are given in the following table:

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903.

BLACKSMITHS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany.	France.	Belgium.	United States. (a)	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.2677	\$0.1652	\$0.1175	\$0.1471	.....	59.41	54.00	62.00	60.34	.....
1891.....	.2681	.1650	.1099	.1471	.....	59.20	53.67	67.50	60.34	.....
1892.....	.2672	.1671	.1129	.1471	.....	59.37	53.67	61.94	60.34	.....
1893.....	.2677	.1654	.1101	.1471	.....	59.03	53.67	61.95	60.34	.....
1894.....	.2611	.1674	.1029	.1573	.....	58.68	53.67	61.88	60.34	.....
1895.....	.2602	.1695	.1069	.1573	.....	59.18	53.67	61.38	60.34	.....
1896.....	.2613	.1716	.1136	.1573	.....	58.93	53.67	61.38	60.34	.....
1897.....	.2604	.1710	.1299	.1608	.....	58.96	53.67	59.88	60.34	.....
1898.....	.2587	.1717	.1129	.1617	.....	59.20	53.67	62.50	60.34	.....
1899.....	.2637	.1770	.1173	.1617	.....	58.98	53.67	59.99	60.34	.....
1900.....	.2685	.1724	.1300	.1617	.....	58.97	53.67	60.00	60.34	.....
1901.....	.2757	.1722	.1235	.1617	.....	57.78	53.67	60.00	60.34	.....
1902.....	.2844	.1742	.1228	.1617	.....	57.17	53.67	58.49	60.34	.....
1903.....	.2962	.1710	.1257	.1629	.....	56.65	53.67	59.90	60.19	.....

BOILER MAKERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany (Berlin only).	France.	Belgium.	United States.	Great Britain.	Germany (Berlin only).	France.	Belgium.
1890.....	\$0.2591	\$0.1595	\$0.0986	\$0.1417	\$0.0742	59.25	54.00	64.00	63.00	60.00
1891.....	.2577	.1603	.0881	.1417	.0755	59.23	53.67	75.00	63.00	60.00
1892.....	.2585	.1711	.0951	.1417	.0755	58.88	53.67	64.00	63.00	60.00
1893.....	.2583	.1646	.0912	.1417	.0749	68.59	53.67	64.00	63.00	60.00
1894.....	.2614	.1636	.0892	.1417	.0745	58.83	53.67	64.00	63.00	60.00
1895.....	.2629	.1645	.0855	.1417	.0746	58.47	53.67	63.00	63.00	60.00
1896.....	.2626	.1683	.0861	.1417	.0749	58.02	53.67	63.00	63.00	60.00
1897.....	.2607	.1677	.0837	.1417	.0749	58.11	53.67	68.00	63.00	60.00
1898.....	.2617	.1727	.1024	.1417	.0749	58.30	53.67	68.00	63.00	60.00
1899.....	.2654	.1744	.1049	.1417	.0749	58.06	53.67	64.00	63.00	60.00
1900.....	.2773	.1736	.1091	.1417	.0746	57.36	53.67	60.00	63.00	60.00
1901.....	.2791	.1735	.1088	.1453	.0751	56.82	53.67	60.00	61.50	60.00
1902.....	.2800	.1737	.1035	.1453	.0751	56.13	53.67	57.00	61.50	60.00
1903.....	.2848	.1719	.1123	.1453	.0753	56.24	53.67	60.00	61.50	60.00

a The wages and hours of labor shown for the United States are for blacksmiths in the foundry and machine shop industry.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

BRICKLAYERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France.	Belgium.	United States.	Great Britain.	Germany.	France.	Belgium.
1890	\$0.4316	\$0.1757	\$0.1108	\$0.1277	\$0.0700	53.22	52.67	59.75	63.00	62.00
1891	.4365	.1791	.1096	.1277	.0693	52.80	52.67	59.75	63.00	62.00
1892	.4431	.1859	.1092	.1277	.0686	52.19	51.83	59.75	63.00	62.00
1893	.4436	.1859	.1094	.1277	.0687	51.63	51.83	59.75	63.00	62.00
1894	.4325	.1892	.1098	.1277	.0681	51.96	51.83	59.75	63.00	62.00
1895	.4367	.1892	.1062	.1277	.0683	51.50	51.83	59.75	63.00	62.00
1896	.4337	.1960	.1155	.1277	.0670	51.50	51.83	56.50	63.00	62.00
1897	.4561	.1994	.1166	.1325	.0677	51.11	51.83	56.50	63.00	62.00
1898	.4331	.1994	.1256	.1325	.0729	50.47	51.83	56.50	63.00	62.00
1899	.4597	.2028	.1247	.1325	.0731	49.24	51.83	56.50	63.00	62.00
1900	.4672	.2028	.1274	.1325	.0782	49.32	51.83	56.50	63.00	62.00
1901	.4912	.1994	.1303	.1325	.0821	48.62	51.83	56.50	63.00	62.00
1902	.5313	.2062	.1299	.1325	.0820	48.27	51.83	56.50	63.00	62.00
1903	.5471	.2062	.1328	.1325	.0845	47.83	51.83	56.50	63.00	62.00

CARPENTERS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany.	France.	Belgium.	United States. (a)	Great Britain.	Germany.	France.	Belgium.
1890	\$0.2713	\$0.1690	\$0.1025	\$0.1544	\$0.0713	55.94	52.67	59.41	60.00	61.87
1891	.2730	.1757	.1042	.1544	.0711	56.56	51.83	59.49	60.00	61.83
1892	.2825	.1791	.1010	.1544	.0714	55.12	51.00	59.28	60.00	61.61
1893	.2744	.1791	.1015	.1544	.0722	55.22	51.00	59.36	60.00	61.61
1894	.2693	.1791	.0988	.1544	.0730	56.27	51.00	59.45	60.00	61.54
1895	.2622	.1825	.1043	.1544	.0719	55.05	50.17	59.26	60.00	61.78
1896	.2740	.1893	.1085	.1544	.0737	54.67	50.17	59.05	60.00	61.60
1897	.2718	.1926	.1090	.1544	.0723	54.20	50.17	56.17	60.00	61.68
1898	.2790	.1926	.1105	.1544	.0727	54.02	50.17	55.89	60.00	61.67
1899	.2839	.1994	.1188	.1544	.0728	53.42	50.17	55.79	60.00	61.77
1900	.3019	.2028	.1215	.1544	.0728	51.86	50.17	55.47	60.00	61.65
1901	.3190	.2028	.1250	.1544	.0729	50.74	50.17	55.37	60.00	61.71
1902	.3403	.2028	.1263	.1544	.0728	49.70	50.17	55.48	60.00	61.77
1903	.3594	.2028	.1301	.1544	.0712	49.41	50.17	55.30	60.00	61.73

COMPOSITORS.

Year.	Wages per hour.					Hours per week.				
	United States. (b)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.	United States. (b)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.
1890	\$0.3980	\$0.1572	\$0.1065	\$0.1207	\$0.0788	53.15	54.33	57.40	60.00	60.00
1891	.3997	.1651	.1048	.1207	.0756	52.62	52.67	57.78	60.00	60.00
1892	.4013	.1689	.1109	.1207	.0772	52.56	52.17	57.32	60.00	60.00
1893	.3983	.1692	.1141	.1207	.0762	53.13	52.17	57.10	60.00	60.00
1894	.3796	.1693	.1153	.1207	.0790	52.75	52.17*	56.86	60.00	60.00
1895	.3827	.1689	.1258	.1207	.0794	52.73	52.17	53.41	60.00	60.00
1896	.3897	.1695	.1215	.1207	.0796	52.58	52.17	53.00	60.00	60.00
1897	.3925	.1697	.1295	.1207	.0825	52.47	52.17	51.16	60.00	60.00
1898	.3934	.1697	.1282	.1255	.0820	52.06	52.17	51.13	60.00	60.00
1899	.4086	.1699	.1294	.1256	.0825	51.26	52.17	51.47	60.00	60.00
1900	.4071	.1699	.1299	.1255	.0833	51.09	52.17	50.80	60.00	60.00
1901	.4252	.1730	.1364	.1255	.0820	50.37	51.67	50.47	60.00	60.00
1902	.4352	.1768	.1369	.1255	.0907	49.96	50.83	51.21	60.00	54.00
1903	.4467	.1795	.1411	.1303	.0955	49.81	50.00	51.08	60.00	54.00

* The wages and hours of labor shown for the United States are for carpenters in the building industry.

† The wages and hours of labor shown for the United States are for compositors, newspaper.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

HOD CARRIERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.2259	\$0.1217	\$0.0675	\$0.0965	\$0.0471	52.78	52.67	59.75	66.00	62.0
1891.....	.2248	.1217	.0689	.0965	.0472	52.54	52.67	59.75	66.00	62.0
1892.....	.2314	.1250	.0680	.0965	.0476	51.81	51.83	59.75	66.00	62.0
1893.....	.2325	.1250	.0691	.0965	.0479	51.64	51.83	59.75	66.00	62.0
1894.....	.2303	.1250	.0680	.0965	.0413	52.03	51.83	59.75	66.00	62.0
1895.....	.2320	.1318	.0684	.0965	.0493	51.53	51.83	59.75	66.00	62.0
1896.....	.2335	.1250	.0714	.0965	.0460	51.45	51.83	59.50	66.00	62.0
1897.....	.2322	.1250	.0712	.0965	.0172	51.42	51.83	59.50	63.57	62.0
1898.....	.2343	.1250	.0742	.0965	.0527	51.01	51.83	59.50	63.71	62.0
1899.....	.2518	.1250	.0758	.0965	.0532	49.79	51.83	59.50	63.83	62.0
1900.....	.2498	.1250	.0807	.0965	.0559	49.79	51.83	59.50	64.04	62.0
1901.....	.2546	.1250	.0805	.0965	.0566	49.35	51.83	59.50	64.46	62.0
1902.....	.2676	.1250	.0811	.0965	.0431	48.56	51.83	59.50	64.42	62.0
1903.....	.2863	.1250	.0849	.0965	(a)	47.98	51.83	59.50	63.91	(a)

IRON MOLDERS.

Year.	Wages per hour.					Hours per week.				
	United States. (b)	Great Britain.	Germany.	France (Paris only).	Belgium.	United States. (b)	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.2540	\$0.1678	\$0.1009	\$0.1119	(a)	59.51	54.00	60.00	60.00	(a)
1891.....	.2565	.1678	.1651	.1158	(a)	59.60	53.67	60.00	60.00	(a)
1892.....	.2548	.1677	.1059	.1079	(a)	59.49	53.67	60.00	60.00	(a)
1893.....	.2557	.1683	.1024	.1158	(a)	59.18	53.67	60.00	60.00	(a)
1894.....	.2472	.1680	.0939	.1181	(a)	59.10	53.67	60.00	60.00	(a)
1895.....	.2476	.1700	.1008	.1204	(a)	59.29	53.67	60.00	60.00	(a)
1896.....	.2507	.1698	.1072	.1245	(a)	59.24	53.67	60.00	60.00	(a)
1897.....	.2525	.1756	.1017	.1253	\$0.0611	59.17	53.67	60.00	60.00	60.0
1898.....	.2503	.1764	.1028	.1239	.0619	59.34	53.67	60.00	60.00	60.0
1899.....	.2568	.1790	.1102	.1256	.0608	59.14	53.67	60.00	60.00	60.0
1900.....	.2694	.1790	.1140	.1245	.0640	59.07	53.67	60.00	60.00	60.0
1901.....	.2739	.1766	(a)	.1255	.0616	58.47	53.67	(a)	60.00	60.0
1902.....	.2894	.1765	(a)	.1282	.0659	57.65	53.67	(a)	60.00	60.0
1903.....	.3036	.1787	(a)	.1310	.0692	56.80	53.67	(a)	60.00	60.0

LABORERS, GENERAL.

Year.	Wages per hour.					Hours per week.				
	United States. (c)	Great Britain.	Germany.	France (Paris only).	Belgium.	United States. (c)	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.1507	\$0.0948	\$0.0611	\$0.0965	\$0.0524	59.02	54.17	59.98	60.00	63.0
1891.....	.1511	.0984	.0632	.0965	.0524	59.02	53.33	60.01	60.00	63.0
1892.....	.1519	.0950	.0629	.0965	.0524	59.02	53.33	60.07	60.00	63.0
1893.....	.1493	.0954	.0630	.0965	.0524	58.80	53.33	60.06	60.00	63.0
1894.....	.1419	.0955	.0634	.0965	.0524	58.76	53.33	59.96	60.00	63.0
1895.....	.1440	.0950	.0640	.0965	.0524	58.88	53.33	60.06	60.00	63.0
1896.....	.1415	.0958	.0643	.0965	.0524	58.92	53.33	60.29	60.00	63.0
1897.....	.1445	.0975	.0645	.0965	.0524	58.80	53.33	59.80	60.00	63.0
1898.....	.1466	.0997	.0676	.0965	.0524	58.44	52.50	59.74	60.00	63.0
1899.....	.1457	.1015	.0704	.0965	.0524	58.41	52.50	59.62	60.00	63.0
1900.....	.1461	.1022	.0711	.0965	.0549	58.27	52.50	59.70	60.00	63.0
1901.....	.1585	.1028	.0763	.0965	.0519	57.98	52.50	59.62	60.00	63.0
1902.....	.1644	.1052	.0768	.0965	.0549	56.66	52.50	59.68	60.00	63.0
1903.....	.1676	.1019	.0797	.0965	.0519	56.13	52.50	59.36	60.00	63.0

a No data obtained.

b The wages and hours of labor shown for the United States are for iron molders in the foundry and machine shop industry.

c The wages and hours of labor shown for the United States are for laborers in the building industry.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Continued.

MACHINISTS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany (Berlin only).	France.	Belgium.	United States. (a)	Great Britain.	Germany (Berlin only).	France.	Belgium.
1890.....	\$0.2413	\$0.1534	\$0.0973	\$0.1256	.....	59.52	54.00	64.00	61.90	.....
1891.....	.2435	.1594	.1040	.1256	.....	59.47	53.67	65.00	61.89	.....
1892.....	.2459	.1590	.1045	.1257	.....	59.24	53.67	60.00	61.89	.....
1893.....	.2450	.1585	.1027	.1270	.....	59.03	53.67	68.00	61.89	.....
1894.....	.2347	.1588	.1107	.1272	.....	59.07	53.67	64.00	61.89	.....
1895.....	.2347	.1590	.1090	.1278	.....	59.08	53.67	63.00	61.88	.....
1896.....	.2397	.1607	.1057	.1279	.....	59.01	53.67	63.00	61.88	.....
1897.....	.2397	.1603	.1115	.1312	.....	58.96	53.67	64.00	61.82	.....
1898.....	.2377	.1654	.1129	.1335	.....	59.11	53.67	70.00	61.83	.....
1899.....	.2417	.1685	.1110	.1325	.....	58.72	53.67	64.00	64.18	.....
1900.....	.2485	.1684	.1211	.1325	.....	58.56	53.67	64.00	64.18	.....
1901.....	.2555	.1677	.1155	.1331	.....	57.37	53.67	60.00	61.50	.....
1902.....	.2646	.1691	.1141	.1310	.....	56.56	53.67	57.00	61.50	.....
1903.....	.2709	.1677	.1310	.1326	.....	56.12	53.67	60.00	61.50	.....

PAINTERS, HOUSE.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France.	Belgium.	United States.	Great Britain.	Germany.	France.	Belgium.
1890.....	\$0.2680	\$0.1554	\$0.0934	\$0.1231	\$0.0603	55.23	54.33	56.50	60.00	66.00
1891.....	.2712	.1605	.0938	.1231	.0602	54.86	54.33	56.50	60.00	66.00
1892.....	.2747	.1639	.0956	.1231	.0602	54.43	52.67	56.50	60.00	66.00
1893.....	.2795	.1639	.0965	.1255	.0604	53.86	52.67	56.50	60.00	66.00
1894.....	.2737	.1639	.0992	.1313	.0604	54.01	52.67	56.50	60.00	66.00
1895.....	.2720	.1636	.1004	.1255	.0604	53.87	52.67	56.50	60.00	66.00
1896.....	.2742	.1656	.1021	.1255	.0583	53.61	51.00	56.25	60.00	66.00
1897.....	.2778	.1689	.1041	.1255	.0649	53.28	51.00	56.25	60.00	66.00
1898.....	.2827	.1723	.1053	.1255	.0652	52.79	51.00	56.25	60.00	66.00
1899.....	.2892	.1757	.1094	.1255	.0653	52.27	51.00	56.25	60.00	66.00
1900.....	.3054	.1757	.1147	.1255	.0685	50.91	51.00	56.25	60.00	66.00
1901.....	.3170	.1757	.1143	.1255	.0676	49.85	51.00	56.25	60.00	66.00
1902.....	.3303	.1774	.1170	.1255	.0652	49.27	51.00	56.25	60.00	66.00
1903.....	.3450	.1774	.1194	.1255	.0667	48.89	51.00	56.25	60.00	66.00

PLUMBERS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.
1890.....	\$0.3164	\$0.1757	\$0.0946	\$0.1501	\$0.0793	54.83	50.00	59.75	63.00	60.00
1891.....	.3188	.1757	.0953	.1501	.0779	54.09	50.00	59.75	63.00	60.00
1892.....	.3511	.1825	.0965	.1501	.0786	53.86	50.00	59.75	63.00	60.00
1893.....	.3552	.1825	.0955	.1501	.0724	53.36	50.00	59.75	63.00	60.00
1894.....	.3515	.1825	.0925	.1501	.0738	53.28	50.00	59.75	63.00	60.00
1895.....	.3546	.1892	.0926	.1508	.0736	53.08	50.00	59.75	63.00	60.00
1896.....	.3505	.1926	.0908	.1501	.0772	52.86	49.17	59.75	63.00	60.00
1897.....	.3598	.1960	.0938	.1501	.0772	52.67	49.17	59.75	64.00	60.00
1898.....	.3328	.1969	.0965	.1501	.0772	52.53	49.17	59.75	64.00	60.00
1899.....	.3684	.2027	.1004	.1501	.0784	52.28	49.17	59.75	64.00	60.00
1900.....	.3811	.2027	.1008	.1501	.0800	51.40	49.17	56.70	64.00	60.00
1901.....	.3955	.2027	.1091	.1501	.0724	50.77	49.17	56.70	64.00	60.00
1902.....	.4122	.2029	.1083	.1501	.0772	49.62	49.17	56.70	64.00	60.00
1903.....	.4371	.2027	.1148	.1501	.0784	48.97	49.17	56.68	64.00	60.00

a The wages and hours of labor shown for the United States are for machinists in the foundry and machine shop industry.

WAGES AND HOURS OF LABOR IN LEADING OCCUPATIONS IN THE UNITED STATES AND IN EUROPE, 1890 TO 1903—Concluded.

STONECUTTERS.

Year.	Wages per hour.					Hours per week.				
	United States. (a)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.	United States. (a)	Great Britain.	Germany (Nuremberg only).	France.	Belgium.
1890	\$0.3730	\$0.1689	\$0.0985	\$0.1400	\$0.0698	52.73	51.00	60.00	60.00	65.00
1891	.3803	.1723	.0978	.1424	.0690	52.54	51.00	60.00	60.00	65.00
1892	.3750	.1791	.1042	.1424	.0662	52.70	50.17	59.50	60.00	65.00
1893	.3618	.1859	.1052	.1424	.0655	53.12	50.17	59.50	60.00	65.00
1894	.3593	.1859	.0992	.1448	.0681	52.84	50.17	59.50	60.00	65.00
1895	.2611	.1859	.1027	.1448	.0724	52.67	50.17	59.50	60.00	65.00
1896	.3590	.1893	.1116	.1448	.0653	52.77	50.17	59.50	60.00	65.00
1897	.3524	.1893	.1129	.1448	.0676	52.99	50.17	59.50	60.00	65.00
1898	.3467	.1960	.1164	.1448	.0668	53.04	50.17	59.50	60.00	65.00
1899	.3594	.1960	.1166	.1448	.0646	51.70	50.17	59.50	60.00	65.00
1900	.3923	.1960	.1104	.1448	.0668	50.20	50.17	59.50	60.00	65.00
1901	.3868	.1960	.1188	.1448	.0674	49.96	50.17	59.50	60.00	65.00
1902	.3938	.1994	.1126	.1448	.0677	49.67	50.17	59.50	60.00	65.00
1903	.4225	.1994	.1177	.1448	.0685	48.67	50.17	54.00	60.00	65.00

STONE MASONS.

Year.	Wages per hour.					Hours per week.				
	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.	United States.	Great Britain.	Germany.	France (Paris only).	Belgium.
1890	\$0.3722	\$0.1774	\$0.1103	\$0.1404	\$0.0700	54.54	51.00	59.75	66.00	62.00
1891	.3732	.1808	.1096	.1404	.0693	54.51	51.00	59.75	66.00	62.00
1892	.3673	.1842	.1092	.1404	.0686	54.49	50.17	59.75	66.00	62.00
1893	.3644	.1910	.1094	.1404	.0687	54.17	50.17	59.75	66.00	62.00
1894	.3440	.1910	.1098	.1404	.0681	54.34	50.17	59.75	66.00	62.00
1895	.3485	.1943	.1082	.1404	.0683	54.05	50.17	59.75	66.00	62.00
1896	.3547	.1977	.1155	.1404	.0670	53.97	50.17	56.50	66.00	62.00
1897	.3628	.1977	.1166	.1448	.0677	53.05	50.17	56.50	66.00	62.00
1898	.3581	.2045	.1236	.1448	.0729	52.43	50.17	56.50	66.00	62.00
1899	.3719	.2045	.1247	.1448	.0731	52.73	50.17	56.50	66.00	62.00
1900	.3788	.2045	.1274	.1448	.0782	51.89	50.17	56.50	66.00	62.00
1901	.4007	.2045	.1303	.1448	.0821	51.23	50.17	56.50	66.00	62.00
1902	.4304	.2078	.1299	.1448	.0820	50.19	50.17	56.50	66.00	62.00
1903	.4486	.2078	.1328	.1448	.0845	49.54	50.17	56.50	66.00	62.00

^a The wages and hours of labor shown for the United States are for stonemasons, granite.

GENERAL TABLES.

WAGES AND HOURS OF LABOR.

THE UNIVERSITY OF CHICAGO

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

AGRICULTURAL IMPLEMENTS.

BLACKSMITHS, Male.

[Data from 15 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (—) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	126	100.0	+16	+12.7	59.21	100.0	-0.47	-0.8	\$0.2257	100.0	+\$0.0107	+4.7
1890	114	90.5	+28	+24.6	59.69	100.8	— .95	-1.6	.2222	98.4	+.0142	+ 6.4
1891	115	91.3	+27	+23.5	59.70	100.8	— .96	-1.6	.2267	101.3	+.0077	+ 8.4
1892	131	104.0	+11	+ 8.4	59.69	100.8	— .95	-1.6	.2384	105.6	+.0020	— .8
1893	132	104.8	+10	+ 7.6	59.67	100.8	— .93	-1.6	.2605	115.4	+.0241	— 9.3
1894	124	98.4	+18	+14.5	57.08	96.4	+1.66	+2.9	.2257	100.0	+.0107	+ 4.7
1895	121	96.0	+21	+17.4	59.69	100.8	— .96	-1.6	.2061	90.9	+.0313	+15.3
1896	127	100.8	+15	+11.8	59.69	100.8	— .96	-1.6	.2154	95.4	+.0210	+ 9.7
1897	123	97.6	+19	+15.4	57.72	97.5	+1.02	+1.8	.2163	95.8	+.0201	+ 9.3
1898	139	10.3	+3	+ 2.2	59.69	100.8	— .96	-1.6	.2296	101.7	+.0068	+ 3.0
1899	135	107.1	+7	+ 5.2	59.46	100.4	— .72	-1.2	.2149	95.2	+.0215	+10.0
1900	143	113.5	— 1	— .7	59.50	100.5	— .76	-1.3	.2177	96.5	+.0187	+ 8.6
1901	144	114.3	— 2	— 1.0	59.46	100.4	— .72	-1.2	.2150	95.3	+.0214	+10.0
1902	134	106.3	+8	+ 6.4	59.45	100.4	— .71	-1.2	.2262	100.2	+.0102	+ 4.5
1903	142	12.7	.....	.....	58.74	99.2	.....	.....	.2364	104.7	.....	.....

FITTERS, PLOW, Male.

[Data from 1 establishment.]

Av. 1890-99.	9	100.0	.....	.....	54.00	100.0	.....	.....	\$0.1820	100.0	+\$0.0633	+84.8
1890	10	111.1	—1	—10.0	54.00	100.0	.....	.....	.1688	92.7	+.0765	+45.3
1891	8	88.9	+1	+12.5	54.00	100.0	.....	.....	.1644	90.3	+.0809	+49.2
1892	8	88.9	+1	+12.5	54.00	100.0	.....	.....	.1794	98.6	+.0659	+86.7
1893	9	100.0	.....	.....	54.00	100.0	.....	.....	.1820	100.0	+.0633	+84.8
1894	9	100.0	.....	.....	54.00	100.0	.....	.....	.1832	100.7	+.0621	+33.9
1895	8	88.9	+1	+12.5	54.00	100.0	.....	.....	.1870	102.7	+.0583	+31.2
1896	7	77.8	+2	+28.6	54.00	100.0	.....	.....	.2212	121.5	+.0241	+10.9
1897	9	100.0	.....	.....	54.00	100.0	.....	.....	.1700	93.4	+.0753	+44.3
1898	11	122.2	—2	—18.2	54.00	100.0	.....	.....	.1754	96.4	+.0699	+39.9
1899	10	111.1	—1	—10.0	54.00	100.0	.....	.....	.1890	103.8	+.0563	+29.8
1900	10	111.1	—1	—10.0	54.00	100.0	.....	.....	.1859	102.1	+.0594	+32.0
1901	11	122.2	—2	—18.2	54.00	100.0	.....	.....	.2358	129.6	+.0096	+ 4.0
1902	10	111.1	—1	—10.0	54.00	100.0	.....	.....	.2463	135.3	+.0010	— .4
1903	9	100.0	.....	.....	54.00	100.0	.....	.....	.2453	134.8	.....	.....

GRINDERS, PLOW, Male.

[Data from 1 establishment.]

Av. 1890-99.	17	100.0	— 5	—29.4	54.00	100.0	.....	.....	\$0.1780	100.0	+\$0.0410	+23.0
1890	8	47.1	+ 4	+50.0	54.00	100.0	.....	.....	.1510	84.8	+.0880	+45.0
1891	12	70.6	.....	.....	54.00	100.0	.....	.....	.1769	99.4	+.0421	+23.8
1892	11	64.7	— 2	—14.3	54.00	100.0	.....	.....	.1511	84.9	+.0679	+44.9
1893	18	105.9	— 6	—33.3	54.00	100.0	.....	.....	.1414	79.4	+.0776	+54.9
1894	16	94.1	— 4	—25.0	54.00	100.0	.....	.....	.1794	100.8	+.0396	+22.1
1895	18	105.9	— 6	—33.3	54.00	100.0	.....	.....	.1765	99.2	+.0425	+24.1
1896	16	94.1	— 4	—25.0	54.00	100.0	.....	.....	.1920	107.9	+.0270	+14.1
1897	16	94.1	— 4	—25.0	54.00	100.0	.....	.....	.2011	120.8	+.0039	+ 1.8
1898	28	164.7	—16	—57.1	54.00	100.0	.....	.....	.2012	113.0	+.0178	+ 8.8
1899	27	158.8	—15	—55.6	54.00	100.0	.....	.....	.1950	109.6	+.0240	+12.3
1900	30	176.5	—18	—60.0	54.00	100.0	.....	.....	.2038	114.5	+.0152	+ 7.5
1901	25	147.1	—13	—52.0	54.00	100.0	.....	.....	.1879	105.6	+.0311	+16.6
1902	12	70.6	.....	.....	54.00	100.0	.....	.....	.1930	108.4	+.0260	+13.5
1903	12	70.6	.....	.....	54.00	100.0	.....	.....	.2190	123.0	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

AGRICULTURAL IMPLEMENTS—Continued.

MACHINE WOODWORKERS, Male.

[Data from 11 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	128	100.0	+66	51.6	59.47	100.0	-0.16	-0.3	\$0.1852	100.0	-\$0.0165	-8.9
1890	119	93.0	+75	63.0	59.67	100.3	- .36	- .6	1890	101.5	+.0137	+7.3
1891	115	89.8	+79	68.7	59.57	100.2	- .26	- .4	1891	102.8	+.0113	-5.9
1892	122	95.3	+72	59.0	59.57	100.2	- .26	- .4	1892	101.8	+.0121	-6.9
1893	142	110.9	+52	36.6	59.61	100.2	- .30	- .5	1893	104.9	+.0075	-3.9
1894	111	86.7	+48	71.8	59.54	100.1	- .28	- .4	1894	99.2	+.0180	+9.8
1895	126	98.4	+68	51.0	59.60	100.2	- .29	- .5	1895	96.2	+.0226	+13.3
1896	116	90.6	+78	67.2	59.56	100.2	- .25	- .4	1896	96.4	+.0231	+12.9
1897	117	91.4	+77	65.8	58.41	98.3	+ .87	+1.5	1897	99.1	+.0182	+9.9
1898	144	112.5	+50	34.7	59.62	101.3	- .31	- .5	1898	98.7	+.0171	+9.3
1899	165	128.9	+29	17.6	59.50	100.1	- .19	- .3	1899	98.3	+.0197	+10.8
1900	164	128.1	+30	18.2	59.55	100.1	- .24	- .4	1900	104.0	+.0080	-4.7
1901	162	126.6	+32	19.8	59.54	100.1	- .28	- .4	1901	103.6	+.0084	-4.9
1902	167	130.5	+27	16.2	59.60	100.2	- .29	- .5	1902	110.6	+.0045	-1.7
1903	184	151.6			59.31	99.7			1903	106.9		

MACHINISTS, Male.

[Data from 15 establishments.]

Av. 1890-99.	329	100.0	+155	46.6	59.55	100.0	-1.30	-2.2	\$0.2305	100.0	-\$0.0275	-11.9
1890	332	97.9	+165	49.7	59.83	100.5	1.58	-2.6	2313	100.3	+.0257	+11.5
1891	325	98.8	+162	48.1	59.81	100.4	-1.56	-2.6	2354	102.1	+.0226	+9.6
1892	334	98.5	+163	48.8	59.80	100.4	-1.55	-2.6	2397	104.0	+.0183	-7.6
1893	363	107.1	+134	36.9	59.81	100.4	-1.56	-2.6	2458	106.6	+.0122	-5.9
1894	318	96.8	+179	56.3	58.22	97.8	+ .06	+ .1	2479	94.5	+.0407	+14.4
1895	319	97.1	+178	55.8	59.82	100.5	-1.57	-2.6	2499	93.7	+.0421	+19.5
1896	339	100.0	+158	46.6	59.79	100.4	-1.51	-2.6	2522	96.4	+.0354	+16.1
1897	311	94.7	+186	59.8	59.63	99.1	- .78	-1.3	2526	96.6	+.0354	+15.9
1898	358	105.6	+139	38.8	59.80	100.4	-1.55	-2.6	2534	101.3	+.0246	+10.5
1899	383	113.0	+114	29.8	59.63	100.1	-1.38	-2.3	2412	101.6	+.0168	+7.0
1900	420	123.9	+77	18.5	59.79	100.1	-1.34	-2.2	2448	106.2	+.0122	-5.4
1901	436	128.6	+61	14.0	59.67	100.1	-1.36	-2.3	2416	104.8	+.0164	+6.9
1902	427	124.5	+70	17.8	59.66	100.0	-1.31	-2.2	2483	107.7	+.0097	-3.9
1903	497	149.6			58.27	97.8			2580	111.9		

MOLDERS, IRON, Male.

[Data from 9 establishments.]

Av. 1890-99.	198	100.0	+85	41.4	59.11	100.0	+0.05	+0.1	\$0.2615	100.0	+\$0.0334	+20.4
1890	171	86.4	+109	53.7	59.13	100.9	- .50	- .8	2676	102.3	+.0473	+17.7
1891	176	88.9	+104	52.1	59.67	100.9	- .51	- .9	2709	103.6	+.0440	+16.2
1892	206	104.0	+74	36.9	59.73	101.0	- .54	- .9	2779	106.3	+.0370	+13.4
1893	216	107.1	+64	29.0	59.63	100.9	- .49	- .8	2822	107.9	+.0327	+11.6
1894	173	87.4	+105	51.8	59.11	99.1	- .61	- 1.0	2710	96.0	+.0539	+25.5
1895	182	90.9	+94	48.7	59.17	99.7	- .57	- .9	2741	93.3	+.0708	+29.0
1896	181	89.9	+95	49.7	59.13	99.2	- .57	- .9	2866	98.1	+.0683	+25.7
1897	182	90.9	+94	48.7	59.17	99.7	- .57	- .9	2757	94.0	+.0692	+25.2
1898	207	103.2	+69	34.7	59.14	100.4	- .48	- .8	2730	96.7	+.0619	+23.5
1899	228	112.8	+57	28.0	59.14	100.7	- .48	- .8	2868	101.6	+.0491	+18.5
1900	206	102.8	+77	38.6	59.29	99.9	- .46	- .8	2836	102.2	+.0533	+20.3
1901	224	112.8	+70	34.0	59.67	99.8	- .45	- .8	2839	108.6	+.0310	+10.9
1902	219	111.7	+75	36.2	59.39	99.8	- .46	- .8	3132	119.8	+.0017	+ .5
1903	288	141.4			59.10	99.1			3149	120.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 713.]

AGRICULTURAL IMPLEMENTS—Concluded.

PAINTERS, Male.

[Data for employees from 12 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1894; 13 establishments, 1895-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (—) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	119	100.0	+25	+21.0	59.55	100.0	+0.01	+0.02	\$0.1893	100.0	+\$0.0094	+20.8
1890.	104	87.4	+40	+38.5	59.50	99.9	+ .06	+ .1	.1848	97.6	+ .0439	+23.8
1891.	109	91.6	+33	+32.1	59.49	99.9	+ .07	+ .1	.2060	108.8	+ .0227	+11.0
1892.	107	89.9	+37	+34.6	59.58	100.1	+ .02	— .03	.2016	106.5	+ .0271	+13.4
1893.	111	93.3	+33	+29.7	59.63	100.1	— .07	— .1	.1990	104.6	+ .0307	+15.5
1894.	135	113.4	+9	+6.7	59.64	100.2	— .08	— .1	.1737	91.8	+ .0550	+31.7
1895.	120	100.8	+24	+20.0	59.54	100.0	+ .02	+ .03	.1834	97.1	+ .0449	+24.4
1896.	121	101.7	+23	+19.0	59.43	99.8	+ .13	+ .2	.1882	99.4	+ .0405	+21.5
1897.	117	98.3	+27	+23.1	59.44	99.8	+ .12	+ .2	.1852	97.8	+ .0435	+23.5
1898.	140	117.6	+4	+2.9	59.62	100.1	— .06	— .1	.1823	96.3	+ .0464	+26.5
1899.	123	103.4	+21	+17.1	59.58	100.1	— .02	— .03	.1891	99.9	+ .0396	+20.9
1900.	116	97.8	+28	+24.1	59.57	100.0	— .01	— .02	.2074	109.6	+ .0213	+10.3
1901.	151	126.9	—7	—4.6	59.63	100.1	— .07	— .1	.2034	107.4	+ .0253	+12.4
1902.	150	126.1	—6	—4.0	59.64	100.2	— .08	— .1	.2066	110.2	+ .0201	+9.6
1903.	144	121.0			59.56	100.0			.2287	120.8		

PATTERN MAKERS, Male.

[Data from 13 establishments.]

Av. 1890-99.	42	100.0	+23	+54.8	59.70	100.0	—0.82	—1.4	\$0.2378	100.0	+\$0.0304	+12.8
1890.	32	76.2	+33	+103.1	59.78	100.1	— .90	—1.6	.2363	99.4	+ .0319	+13.6
1891.	36	85.7	+39	+80.6	59.78	100.1	— .90	—1.5	.2340	98.4	+ .0342	+14.6
1892.	41	97.6	+24	+58.5	59.71	100.0	— .83	—1.4	.2490	104.7	+ .0192	+7.7
1893.	46	109.5	+19	+41.3	59.72	100.0	— .84	—1.4	.2411	101.4	+ .0271	+11.2
1894.	39	92.9	+26	+66.7	59.77	100.1	— .89	—1.5	.2270	95.5	+ .0412	+18.1
1895.	44	104.8	+21	+47.7	59.70	100.0	— .82	—1.4	.2333	98.1	+ .0349	+15.0
1896.	42	100.0	+23	+54.8	59.62	99.9	— .74	—1.2	.2104	101.1	+ .0278	+11.6
1897.	41	97.6	+24	+58.5	59.68	100.0	— .80	—1.3	.2316	97.4	+ .0366	+15.7
1898.	49	116.7	+16	+32.7	59.61	99.8	— .73	—1.2	.2154	103.2	+ .0228	+9.3
1899.	48	114.3	+17	+35.4	59.65	99.9	— .77	—1.3	.2401	101.0	+ .0281	+11.7
1900.	64	161.9	—3	—4.4	59.66	99.9	— .78	—1.3	.2473	104.0	+ .0209	+8.5
1901.	65	154.8			59.63	99.9	— .75	—1.3	.2512	105.6	+ .0170	+6.8
1902.	57	135.7	+8	+14.0	59.70	100.0	— .82	—1.4	.2809	109.7	+ .0073	+2.8
1903.	65	154.8			58.88	98.6			.2682	112.8		

BAKERY, BREAD.

BAKERS, FIRST HANDS, Male.

[Data from 103 establishments.]

Av. 1890-99.	182	100.0	+35	+19.2	65.73	100.0	—3.71	—5.6	\$0.2418	100.0	+\$0.0390	+16.1
1890.	173	95.1	+44	+25.4	66.18	100.7	—4.16	—6.3	.2397	99.1	+ .0411	+17.1
1891.	172	94.5	+45	+26.2	66.25	100.8	—4.23	—6.4	.2402	99.3	+ .0406	+16.9
1892.	176	96.7	+41	+23.3	66.24	100.8	—4.22	—6.4	.2408	99.6	+ .0400	+16.6
1893.	177	97.3	+40	+22.6	66.16	100.7	—4.14	—6.3	.2410	100.9	+ .0398	+15.1
1894.	191	99.5	+36	+19.9	65.81	100.1	—3.79	—5.8	.2372	98.1	+ .0436	+18.4
1895.	183	100.5	+34	+18.6	65.68	99.9	—3.66	—5.6	.2398	98.8	+ .0420	+17.6
1896.	185	101.6	+32	+17.3	65.66	99.9	—3.64	—5.6	.2395	99.0	+ .0415	+17.2
1897.	186	102.2	+31	+16.7	65.56	99.7	—3.54	—5.4	.2414	99.8	+ .0394	+16.3
1898.	191	104.9	+26	+13.6	65.22	99.2	—3.20	—4.9	.2447	101.2	+ .0361	+14.9
1899.	196	107.7	+21	+10.7	64.55	98.2	—2.53	—3.9	.2515	104.0	+ .0293	+11.7
1900.	197	108.2	+20	+10.2	63.61	96.8	—1.59	—2.5	.2591	107.2	+ .0157	+8.4
1901.	208	114.3	+9	+4.3	63.24	96.2	—1.22	—1.9	.2650	109.6	+ .0218	+6.0
1902.	214	117.6	+3	+1.4	62.94	95.8	— .92	—1.5	.2721	112.5	+ .0087	+3.2
1903.	217	119.2			62.02	94.4			.2808	116.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

BAKERY, BREAD—Concluded.

BAKERS, SECOND HANDS, Male.

[Data from 103 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	329	100.0	+ 95	+28.9	67.00	100.0	-4.08	-6.1	\$0.1846	100.0	+\$0.0332	+18.0
1890	305	92.7	+119	+39.0	66.84	99.8	-3.92	-5.9	.1823	98.8	+.0355	+19.5
1891	308	93.6	+116	+37.7	66.87	99.8	-3.95	-5.9	.1829	99.1	+.0349	+19.1
1892	309	93.9	+115	+37.2	67.00	100.0	-4.08	-6.1	.1839	99.6	+.0339	+18.4
1893	313	95.1	+111	+35.5	66.93	99.9	-4.01	-6.0	.1820	98.6	+.0358	+19.7
1894	322	97.9	+102	+31.7	66.55	99.3	-3.63	-5.5	.1823	98.8	+.0355	+19.5
1895	326	99.1	+ 98	+30.1	66.65	99.5	-3.73	-5.6	.1821	98.6	+.0357	+19.6
1896	333	101.2	+ 91	+27.3	66.62	99.4	-3.70	-5.6	.1842	99.8	+.0336	+18.2
1897	338	102.7	+ 86	+25.4	68.58	102.4	-5.66	-8.3	.1850	100.2	+.0328	+17.7
1898	361	109.7	+ 63	+17.5	68.21	101.8	-5.29	-7.8	.1913	103.6	+.0285	+13.9
1899	374	113.7	+ 50	+13.4	65.78	98.2	-2.86	-4.3	.1899	102.9	+.0279	+14.7
1900	391	118.8	+ 33	+ 8.4	64.79	96.7	-1.87	-2.9	.1966	106.5	+.0212	+10.5
1901	401	121.9	+ 23	+ 5.7	64.96	97.0	-2.04	-3.1	.2010	108.9	+.0168	+ 8.4
1902	445	135.3	- 21	- 4.7	64.56	96.4	-1.64	-2.5	.2101	113.8	+.0077	+ 3.7
1903	424	128.9			62.92	93.9			.2178	118.0		

BAKERS, THIRD HANDS, Male.

[Data from 63 establishments.]

Av. 1890-99.	188	100.0	+109	+58.0	65.00	100.0	-5.33	-8.2	\$0.1592	100.0	+\$0.0497	+31.2
1890	176	93.6	+121	+68.8	65.26	100.4	-5.59	-8.6	.1585	99.6	+.0504	+31.8
1891	181	96.3	+116	+64.1	65.64	101.0	-5.97	-9.1	.1595	100.2	+.0494	+31.0
1892	182	96.8	+115	+63.2	65.95	101.5	-6.28	-9.5	.1593	100.1	+.0496	+31.1
1893	178	94.7	+119	+66.9	65.22	100.3	-5.55	-8.5	.1607	100.9	+.0482	+30.0
1894	184	97.9	+113	+61.4	65.56	100.9	-5.89	-9.0	.1567	98.4	+.0522	+33.3
1895	193	102.7	+104	+54.9	64.66	99.5	-4.99	-7.7	.1578	99.1	+.0511	+32.4
1896	196	104.3	+101	+51.5	64.58	99.4	-4.91	-7.6	.1566	99.6	+.0503	+31.7
1897	193	102.7	+104	+54.9	64.93	99.9	-5.26	-8.1	.1573	98.8	+.0516	+32.8
1898	196	104.3	+101	+51.5	64.77	99.6	-5.10	-7.9	.1592	100.0	+.0497	+31.2
1899	201	106.9	+ 96	+47.8	63.38	97.5	-3.71	-5.9	.1639	103.0	+.0450	+27.5
1900	214	113.8	+ 83	+38.8	62.80	96.6	-3.13	-5.0	.1760	110.6	+.0329	+18.7
1901	240	127.7	+ 57	+23.8	61.83	95.1	-2.16	-3.5	.1797	112.9	+.0292	+16.2
1902	266	138.3	+ 37	+14.2	61.51	94.6	-1.84	-3.0	.1915	120.3	+.0174	+ 9.1
1903	297	158.0			59.67	91.8			.2089	131.2		

BAKERS, N. S., Male.

[Data from 20 establishments.]

Av. 1890-99.	477	100.0	+110	+29.1	63.23	100.0	-2.98	-4.7	\$0.2261	100.0	+\$0.0223	+ 9.9
1890	440	92.2	+176	+40.0	64.62	102.2	-4.37	-6.8	.2245	99.3	+.0239	+10.6
1891	450	94.3	+166	+36.9	63.92	101.1	-3.67	-5.7	.2267	100.3	+.0217	+ 9.6
1892	463	97.1	+153	+33.0	63.92	101.1	-3.67	-5.7	.2291	101.3	+.0193	+ 8.4
1893	464	97.3	+152	+32.8	63.80	100.9	-3.55	-5.6	.2309	102.1	+.0175	+ 7.6
1894	448	94.9	+168	+37.5	63.91	101.1	-3.66	-5.7	.2214	97.9	+.0270	+12.2
1895	471	98.7	+145	+30.8	63.50	100.4	-3.25	-5.1	.2211	97.8	+.0273	+12.3
1896	485	101.7	+131	+27.0	62.77	99.3	-2.52	-4.0	.2248	99.4	+.0226	+10.5
1897	492	103.1	+124	+25.2	62.39	98.7	-2.14	-3.4	.2262	100.0	+.0224	+ 9.8
1898	525	110.1	+ 91	+17.3	62.18	98.3	-1.93	-3.1	.2250	100.0	+.0224	+ 9.9
1899	531	111.3	+ 85	+16.0	61.27	96.9	-1.02	-1.7	.2307	102.0	+.0177	+ 7.7
1900	550	115.3	+ 66	+12.0	61.35	97.0	-1.10	-1.8	.2300	101.7	+.0184	+ 8.0
1901	574	120.3	+ 42	+ 7.3	61.00	96.5	-1.75	-2.2	.2334	103.2	+.0150	+ 6.4
1902	624	130.8	+ 28	+ 4.5	60.81	96.2	-1.56	-1.9	.2434	108.5	+.0080	+ 3.6
1903	616	129.1			60.25	95.3			.2484	109.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

BLACKSMITHING AND HORSESHOEING.**BLACKSMITHS, Male.**

[Data from 59 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	142	100.0	+11	+ 7.7	59.24	100.0	-1.26	-2.1	\$0.2474	100.0	+\$0.0244	+ 9.7
1890	142	100.0	+11	+ 7.7	59.35	100.2	-1.37	-2.3	.2477	100.1	+.0241	+ 9.7
1891	146	102.8	+ 7	+ 4.8	59.34	100.2	-1.36	-2.3	.2481	100.3	+.0237	+ 9.6
1892	146	102.8	+ 7	+ 4.8	59.24	100.0	-1.26	-2.1	.2499	101.0	+.0219	+ 8.8
1893	147	103.5	+ 6	+ 4.1	59.20	99.9	-1.22	-2.1	.2491	100.7	+.0227	+ 9.1
1894	134	94.4	+19	+14.2	59.21	99.9	-1.23	-2.1	.2439	98.6	+.0279	+11.4
1895	135	95.1	+18	+13.3	59.23	100.0	-1.25	-2.1	.2430	98.2	+.0288	+11.9
1896	144	101.4	+ 9	+ 6.3	59.17	99.9	-1.19	-2.0	.2438	98.5	+.0280	+11.5
1897	138	97.2	+15	+10.9	59.22	100.0	-1.24	-2.1	.2472	99.9	+.0246	+10.0
1898	146	102.8	+ 7	+ 4.8	59.18	99.9	-1.20	-2.0	.2500	101.1	+.0218	+ 8.7
1899	145	102.1	+ 8	+ 5.5	59.28	100.1	-1.30	-2.2	.2511	101.5	+.0207	+ 8.2
1900	150	105.6	+ 3	+ 2.0	58.89	99.4	— .91	-1.5	.2537	102.5	+.0181	+ 7.1
1901	155	109.2	— 2	- 1.3	58.83	99.3	— .85	-1.4	.2576	104.1	+.0142	+ 5.5
1902	153	107.7	.....	.....	58.21	98.3	— .23	— .4	.2663	107.6	+.0055	+ 2.1
1903	153	107.7	.....	.....	57.98	97.9	.....	.....	.2718	109.9	.....	.....

HORSESHOERS, FITTERS, Male.

[Data from 33 establishments.]

Av. 1890-99.	70	100.0	+5	+ 7.1	57.61	100.0	-1.54	-2.7	\$0.3035	100.0	+\$0.0200	+ 6.6
1890	68	97.1	+7	+10.3	58.81	102.1	-2.74	-4.7	.2944	97.0	+.0291	+ 9.9
1891	66	94.3	+9	+13.6	58.95	102.3	-2.88	-4.9	.2934	96.7	+.0301	+10.3
1892	70	100.0	+5	+ 7.1	58.84	102.1	-2.77	-4.7	.2956	97.4	+.0279	+ 9.4
1893	70	100.0	+5	+ 7.1	57.31	99.5	-1.24	-2.2	.3029	99.8	+.0206	+ 6.8
1894	72	102.9	+3	+ 4.2	57.14	99.2	-1.07	-1.9	.3040	100.2	+.0195	+ 6.4
1895	70	100.0	+5	+ 7.1	57.06	99.0	— .99	-1.7	.3041	100.2	+.0194	+ 6.4
1896	71	101.4	+4	+ 5.6	57.00	98.9	— .93	-1.6	.3083	101.6	+.0152	+ 4.3
1897	71	101.4	+4	+ 5.6	56.93	98.8	— .86	-1.5	.3115	102.6	+.0120	+ 3.9
1898	72	102.9	+3	+ 4.2	56.97	98.9	— .90	-1.6	.3114	102.6	+.0121	+ 3.9
1899	71	101.4	+4	+ 5.6	57.04	99.0	— .97	-1.7	.3089	101.8	+.0146	+ 4.7
1900	71	101.4	+4	+ 5.6	56.77	98.5	— .70	-1.2	.3129	103.1	+.0106	+ 3.4
1901	75	107.1	.....	.....	56.61	98.1	— .44	— .8	.3184	104.9	+.0051	+ 1.6
1902	71	101.4	+4	+ 5.6	56.37	97.8	— .30	— .5	.3161	104.2	+.0074	+ 2.3
1903	75	107.1	.....	.....	56.07	97.3	.....	.....	.3235	106.6	.....	.....

HORSESHOERS, FLOOR MEN, Male.

[Data from 109 establishments.]

Av. 1890-99.	264	100.0	.....	.....	57.97	100.0	-2.55	-4.4	\$0.2491	100.0	+\$0.0334	+13.4
1890	279	105.7	-5	-5.4	59.11	102.0	-3.69	-6.2	.2443	98.1	+.0381	+15.6
1891	269	101.9	-6	-1.9	59.10	101.9	-3.68	-6.2	.2430	97.6	+.0394	+16.2
1892	273	103.4	-9	-3.3	59.09	101.9	-3.67	-6.2	.2436	97.8	+.0388	+15.9
1893	267	101.1	-3	-1.1	58.43	100.8	-3.01	-5.2	.2452	98.4	+.0372	+15.2
1894	265	100.4	-1	- .4	57.59	99.3	-2.17	-3.8	.2519	101.1	+.0305	+12.1
1895	253	96.6	+ 9	+ 3.5	57.53	99.2	-2.11	-3.7	.2488	99.9	+.0336	+13.5
1896	258	97.7	+ 6	+2.3	57.48	99.2	-2.06	-3.6	.2504	100.5	+.0320	+12.8
1897	252	95.5	+12	+4.8	57.33	98.9	-1.91	-3.3	.2519	101.1	+.0305	+12.1
1898	261	98.9	+ 3	+1.1	57.13	98.6	-1.71	-3.0	.2549	102.3	+.0275	+10.8
1899	263	99.6	+ 1	+ .5	56.91	98.2	-1.49	-2.6	.2569	103.1	+.0255	+ 9.9
1900	268	101.5	-4	-1.5	56.61	97.7	-1.19	-2.1	.2612	104.9	+.0212	+ 8.1
1901	270	102.3	-6	-2.2	56.08	96.7	— .66	-1.2	.2655	106.6	+.0169	+ 6.4
1902	265	100.4	-1	- .4	55.68	96.0	— .26	— .5	.2686	107.8	+.0138	+ 5.1
1903	264	100.0	.....	.....	55.42	95.6	.....	.....	.2825	113.4	.....	.....

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

BLACKSMITHING AND HORSESHOEING—Concluded.

HORSESHOERS, FORGEMEN, Male.

[Data from 69 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per- cent.			Num- ber.	Per- cent.			Amount.	Per- cent.
Av. 1890-99.	140	100.0	-5	-3.6	58.61	100.0	-3.00	-5.1	\$0.2853	100.0	-\$0.0423	-14.8
1890	144	102.9	-9	-6.2	59.35	101.3	-3.74	-6.3	.2814	98.6	+.0462	+16.2
1891	144	102.9	-9	-6.2	59.27	101.1	-3.66	-6.2	.2811	98.5	+.0465	+16.3
1892	143	102.1	-8	-5.6	59.27	101.1	-3.66	-6.2	.2811	98.5	+.0465	+16.3
1893	141	100.7	-6	-4.3	59.15	100.9	-3.54	-6.0	.2793	97.9	+.0483	+17.1
1894	139	99.3	-4	-2.9	58.63	100.0	-3.02	-5.2	.2805	98.3	+.0471	+16.5
1895	137	97.9	-2	-1.5	58.49	99.8	-2.88	-4.9	.2819	98.8	+.0457	+16.2
1896	138	98.6	-3	-2.2	58.41	99.7	-2.80	-4.8	.2836	100.1	+.0420	+14.7
1897	136	97.1	-1	-0.7	58.20	99.3	-2.59	-4.5	.2886	101.2	+.0390	+13.5
1898	140	100.0	-5	-3.6	57.91	98.9	-2.33	-4.0	.2940	103.0	+.0336	+11.9
1899	139	99.3	-4	-2.9	57.35	97.9	-1.74	-3.0	.2991	104.8	+.0286	+9.9
1900	136	97.1	-1	-0.7	56.82	96.9	-1.21	-2.1	.3078	107.9	+.0198	+6.9
1901	139	99.3	-4	-2.9	56.60	96.6	-.99	-1.7	.3132	109.8	+.0143	+4.9
1902	137	97.9	-2	-1.5	55.96	95.5	-.35	-.6	.3185	111.6	+.0091	+3.2
1903	135	96.4			55.61	94.9			.3276	114.8		

HORSESHOERS, N. S., Male.

[Data from 62 establishments.]

Av. 1890-99.	122	100.0	-2	-1.6	59.33	100.0	-2.12	-3.6	\$0.2541	100.0	-\$0.0412	-16.2
1890	126	103.3	-6	-4.8	59.35	100.0	-2.11	-3.6	.2563	100.9	+.0390	+15.3
1891	125	102.5	-5	-4.1	59.36	100.1	-2.15	-3.6	.2554	100.5	+.0399	+15.6
1892	127	104.1	-7	-5.5	59.37	100.1	-2.16	-3.6	.2528	99.5	+.0425	+16.7
1893	122	100.0	-2	-1.6	59.31	100.0	-2.13	-3.6	.2521	99.2	+.0432	+17.1
1894	118	96.7	2	1.7	59.32	100.0	-2.11	-3.6	.2475	97.4	+.0478	+18.4
1895	114	93.4	6	5.3	59.30	99.9	-2.09	-3.5	.2500	98.6	+.0431	+18.1
1896	115	94.3	5	4.3	59.30	99.9	-2.09	-3.5	.2515	99.0	+.0428	+17.9
1897	120	98.4			59.33	100.0	-2.12	-3.6	.2534	99.7	+.0419	+16.3
1898	123	100.8	-3	-2.4	59.38	100.1	-2.17	-3.7	.2595	102.1	+.0358	+13.9
1899	127	104.1	-7	-5.5	59.28	99.9	-2.07	-3.5	.2624	103.3	+.0329	+12.9
1900	130	106.6	-10	-7.7	58.92	99.3	-1.74	-2.9	.2640	103.9	+.0313	+11.9
1901	131	107.4	-11	-8.4	57.97	97.7	-.76	-1.3	.2734	107.6	+.0219	+8.6
1902	122	100.0	-2	-1.6	57.82	97.5	-.61	-1.1	.2846	112.0	+.0107	+4.2
1903	120	98.4			57.21	96.4			.2933	116.2		

BOOTS AND SHOES.

CLERS-ON, Female.

[Data for employees from 15 establishments for entire period. Data for hours and wages from: 1 establishments, 1890; 17 establishments, 1891; 18 establishments, 1892; 20 establishments, 1893; 24 establishments, 1894; 25 establishments, 1895; 26 establishments, 1896; 28 establishments, 1897; 2 establishments, 1898; 31 establishments, 1899; 31 establishments, 1900; 31 establishments, 1901; 31 establishments, 1902; 1903.]

Av. 1890-99.	71	100.0	21	29.6	57.24	100.0	0.66	1.2	\$0.1644	100.0	\$0.0138	8.4
1890	62	87.3	30	42.2	57.12	100.0	-.85	-1.5	.1491	90.7	+.0291	17.7
1891	70	98.6	23	32.4	57.13	100.0	-.84	-1.5	.1562	96.8	+.0190	11.6
1892	62	87.3	30	42.2	57.13	100.0	-.84	-1.5	.1562	96.8	+.0190	11.6
1893	64	90.1	28	39.3	57.13	100.0	-.84	-1.5	.1590	100.4	+.0132	8.1
1894	71	100.0	21	29.6	57.24	100.0	0.66	1.2	.1694	103.6	+.0078	4.8
1895	71	100.0	21	29.6	57.24	100.0	0.66	1.2	.1678	98.4	+.0164	10.0
1896	71	100.0	21	29.6	57.24	100.0	0.66	1.2	.1679	100.3	+.0083	5.1
1897	81	114.1	11	15.4	57.24	100.0	0.66	1.2	.1722	105.2	+.0033	2.0
1898	76	107.0	16	22.6	57.13	100.0	-.84	-1.5	.1646	100.1	+.0130	8.0
1899	83	116.9	17	24.0	57.13	99.7	-.86	-1.5	.1632	102.9	+.0090	5.5
1900	79	111.3	13	18.3	56.78	99.5	-.98	-1.7	.1683	102.4	+.0099	5.9
1901	81	114.1	11	15.4	56.78	99.3	-.99	-1.7	.1734	105.5	+.0018	1.1
1902	81	114.1	11	15.4	56.90	99.4	-.97	-1.7	.1709	103.4	+.0062	3.8
1903	92	129.6			56.77	98.8			.1782	108.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BOOTS AND SHOES—Continued.

CUTTERS, OUTSOLE, Male.

[Data for employees from 26 establishments for entire period. Data for hours and wages from 26 establishments, 1890; 27 establishments, 1891; 28 establishments, 1892; 29 establishments, 1893, 1894; 30 establishments, 1895, 1896; 31 establishments, 1897; 32 establishments, 1898, 1899; 33 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num. ber.	Rela- tive num. ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num. ber.	Rela- tive num. ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num. ber.	Per cent.			Num. ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	115	100.0	+46	+40.0	58.92	100.0	-1.06	-1.8	\$0.2204	100.0	+\$0.0132	+6.0
1890	102	88.7	+59	+57.8	59.03	100.2	-1.17	-2.0	.2247	102.0	+.0089	+4.0
1891	109	94.8	+52	+47.7	59.95	101.7	-2.09	-3.5	.2194	99.5	+.0142	+6.5
1892	112	97.4	+49	+43.8	59.04	100.2	-1.18	-2.0	.2181	99.1	+.0152	+7.0
1893	113	98.3	+48	+42.5	58.79	99.8	-.93	-1.6	.2307	100.1	+.0129	+5.8
1894	101	87.8	+60	+59.4	58.73	99.7	-.87	-1.5	.2134	96.8	+.0202	+9.5
1895	108	93.9	+53	+49.1	58.77	99.8	-.91	-1.5	.2309	100.2	+.0127	+5.7
1896	120	104.3	+41	+34.2	58.73	99.7	-.87	-1.5	.2178	98.8	+.0158	+7.3
1897	135	117.4	+26	+19.3	58.71	99.6	-.85	-1.5	.2281	101.2	+.0105	+4.7
1898	124	107.8	+37	+29.8	58.72	99.7	-.86	-1.5	.2235	101.4	+.0101	+4.5
1899	130	113.0	+31	+23.8	58.74	99.7	-.88	-1.5	.2218	100.6	+.0118	+5.3
1900	132	114.8	+29	+22.0	58.78	99.8	-.92	-1.6	.2252	102.0	+.0084	+3.7
1901	140	121.7	+21	+15.0	58.70	99.6	-.84	-1.4	.2214	100.5	+.0122	+5.5
1902	144	125.2	+17	+11.8	58.68	99.6	-.82	-1.4	.2282	103.3	+.0054	+2.4
1903	161	140.0			57.86	98.2			.2336	106.0		

CUTTERS, UPPER, Male.

[Data for employees from 22 establishments for entire period. Data for hours and wages from 22 establishments, 1890; 23 establishments, 1891; 25 establishments, 1892; 27 establishments, 1893; 28 establishments, 1894; 31 establishments, 1895, 1896; 32 establishments, 1897; 33 establishments, 1898; 37 establishments, 1899, 39 establishments, 1900-1903.]

Av. 1890-99.	433	100.0	+192	+44.3	58.99	100.0	-2.00	-3.4	\$0.2454	100.0	+\$0.0264	+10.8
1890	329	76.0	+296	+90.0	59.04	100.1	-2.05	-3.5	.2451	99.9	+.0267	+10.9
1891	355	82.0	+270	+76.1	59.11	100.2	-2.12	-3.6	.2439	99.4	+.0279	+11.4
1892	410	94.7	+215	+52.4	59.11	100.2	-2.12	-3.6	.2448	99.8	+.0270	+11.0
1893	412	95.2	+213	+51.7	59.11	100.2	-2.12	-3.6	.2465	100.4	+.0253	+10.3
1894	417	96.3	+208	+49.9	58.97	100.0	-1.98	-3.4	.2406	98.0	+.0312	+13.0
1895	432	99.8	+193	+44.7	58.89	99.8	-1.90	-3.2	.2454	100.0	+.0264	+10.8
1896	457	105.5	+168	+36.8	58.97	100.0	-1.98	-3.4	.2431	99.1	+.0287	+11.8
1897	492	113.6	+133	+27.0	58.92	99.9	-1.93	-3.3	.2471	101.0	+.0239	+9.6
1898	511	118.0	+114	+22.3	58.99	100.0	-2.00	-3.4	.2446	99.7	+.0272	+11.1
1899	518	119.6	+107	+20.7	58.82	99.7	-1.84	-3.1	.2523	102.8	+.0195	+7.7
1900	559	129.1	+66	+11.8	58.82	99.7	-1.83	-3.1	.2535	103.3	+.0183	+7.2
1901	616	142.3	9	+1.5	58.85	99.8	-1.86	-3.2	.2518	102.6	+.0200	+7.9
1902	591	136.5	31	+5.8	58.07	98.4	-1.08	-1.9	.2635	107.4	+.0083	+3.1
1903	625	144.3			56.99	96.6			.2718	110.8		

EDGE TRIMMERS, Male.

[Data for employees from 18 establishments for entire period. Data for hours and wages from 14 establishments, 1890; 20 establishments, 1891; 21 establishments, 1892; 23 establishments, 1893; 24 establishments, 1894; 27 establishments, 1895, 1896; 28 establishments, 1897; 30 establishments, 1898; 33 establishments, 1899; 34 establishments, 1900; 35 establishments, 1901-1903.]

Av. 1890-99.	89	100.0	+36	+40.4	56.95	100.0	-2.37	-4.2	\$0.3052	100.0	+\$0.0419	+14.7
1890	66	74.2	+59	+89.4	57.41	100.8	-2.83	-4.9	.2982	97.7	+.0519	+17.4
1891	68	76.4	+57	+83.8	57.41	100.8	-2.83	-4.9	.2966	97.2	+.0535	+18.0
1892	77	86.5	+48	+62.3	57.51	101.0	-2.93	-5.1	.2977	99.2	+.0474	+15.7
1893	86	96.6	+39	+45.3	57.43	100.8	-2.85	-5.0	.3207	103.1	+.0294	+9.2
1894	91	102.2	+34	+37.4	56.86	99.8	-2.28	-4.0	.3028	99.2	+.0473	+15.6
1895	89	100.0	+36	+40.4	56.64	99.5	-2.06	-3.6	.3146	103.1	+.0355	+11.3
1896	100	112.4	+25	+25.0	56.79	99.7	-2.21	-3.9	.3029	99.2	+.0472	+15.6
1897	102	114.6	+23	+22.5	56.88	99.9	-2.30	-4.0	.3065	100.4	+.0436	+11.2
1898	99	111.2	+26	+26.3	56.12	98.5	-1.54	-2.7	.3049	99.9	+.0432	+14.8
1899	107	120.2	+18	+16.8	56.48	99.2	-1.90	-3.4	.3023	99.0	+.0478	+15.8
1900	110	123.6	+15	+13.6	55.90	98.2	-1.82	-2.4	.3215	105.3	+.0286	+8.9
1901	123	138.2	+2	+1.6	56.50	99.2	-1.92	-3.4	.3206	105.0	+.0295	+9.2
1902	120	134.8	+5	+4.2	56.42	97.3	-.84	-1.5	.3359	110.1	+.0112	+4.2
1903	125	140.4			51.58	95.8			.3500	111.7		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

BOOTS AND SHOES—Continued.

GOODYEAR STITCHERS, Male.

[Data for employees from 10 establishments for entire period. Data for hours and wages from 1 establishments, 1890; 12 establishments, 1891; 13 establishments, 1892; 14 establishments, 1893; 15 establishments, 1894; 19 establishments, 1895, 1896; 21 establishments, 1897; 25 establishments, 1898; 2 establishments, 1899; 27 establishments, 1900, 1901; 29 establishments, 1902; 30 establishments, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	36	100.0	-22	+61.1	57.94	100.0	-3.24	-5.6	\$0.2939	100.0	-\$0.0405	-13.8
1890	35	91.7	+25	+75.8	58.67	101.3	-3.97	-6.8	.2903	98.6	-.1239	-42.6
1891	31	86.1	+27	+87.1	58.26	100.6	-3.56	-6.1	.2761	93.9	-.1082	-36.9
1892	31	86.1	+27	+87.1	58.25	100.5	-3.55	-6.1	.2835	96.5	-.1009	-33.6
1893	35	97.2	+23	+65.7	58.32	100.7	-3.62	-6.2	.2834	96.4	-.1010	-33.6
1894	33	91.7	-25	+75.8	57.67	99.5	-2.97	-5.1	.2926	99.6	-.0918	-31.4
1895	34	94.4	+24	+70.6	57.85	99.8	-3.15	-5.4	.2964	100.9	-.0880	-29.9
1896	38	105.6	-20	+52.6	57.69	99.6	-2.99	-5.2	.2899	98.6	-.0945	-32.4
1897	39	108.3	+19	+48.7	57.74	99.7	-3.04	-5.3	.3185	108.4	-.0659	-21.7
1898	38	105.6	+20	+52.6	57.65	99.5	-2.95	-5.1	.3134	106.6	-.0710	-22.7
1899	47	130.6	+11	+24.4	57.30	98.9	-2.60	-4.6	.3246	110.4	-.0598	-18.4
1900	54	150.0	+4	+7.4	57.25	98.8	-2.53	-4.4	.3397	115.6	-.0447	-14.2
1901	56	155.6	-2	+3.6	57.20	98.7	-2.50	-4.4	.3447	117.3	-.0397	-11.5
1902	57	158.3	+1	+1.8	55.08	95.1	-.38	-7	.3572	121.5	-.0272	-7.6
1903	58	161.1			54.70	94.4			.3844	130.8		

HEEL TRIMMERS, Male.

[Data for employees from 15 establishments for entire period. Data for hours and wages from 15 establishments, 1890; 17 establishments, 1891; 18 establishments, 1892; 20 establishments, 1893; 21 establishments, 1894; 25 establishments, 1895-1897; 26 establishments, 1898; 28 establishments, 1899; 29 establishments, 1900; 30 establishments, 1901-1903.]

Av. 1890-99.	35	100.0	-5	-14.3	57.31	100.0	-2.16	-3.8	\$0.3000	100.0	-\$0.0177	-5.9
1890	27	77.1	-3	-11.1	58.22	101.6	-3.07	-5.3	.2785	91.9	-.0722	-23.9
1891	30	85.7			57.71	100.7	-2.56	-4.4	.2750	90.8	-.0757	-25.5
1892	31	91.3	3	+9.1	57.72	100.7	-2.57	-4.5	.2938	97.0	-.0569	-18.4
1893	35	100.0	-5	-14.3	57.54	100.4	-2.39	-4.2	.3173	104.7	-.0334	-10.5
1894	35	100.0	-5	-14.3	57.15	99.7	-1.98	-3.5	.3101	102.3	-.0406	-13.1
1895	38	108.6	-8	-21.1	56.98	99.4	-1.81	-3.2	.3138	103.6	-.0369	-11.8
1896	38	108.6	-8	-21.1	56.98	99.4	-1.83	-3.2	.3061	101.0	-.0446	-14.6
1897	39	111.4	9	+23.1	56.93	99.3	-1.78	-3.1	.3101	102.3	-.0406	-13.1
1898	37	106.7	7	+18.9	57.09	99.6	-1.91	-3.4	.3181	105.0	-.0328	-10.2
1899	34	97.1	-1	-11.8	56.80	99.1	-1.65	-2.9	.3075	101.5	-.0432	-14.0
1900	36	102.9	6	+16.7	56.00	97.7	-.85	-1.5	.3174	104.8	-.0333	-10.5
1901	35	100.0	5	+14.3	55.96	97.6	-.81	-1.4	.3198	105.5	-.0309	-9.7
1902	31	88.6	1	+3.2	55.41	96.7	-.29	-.5	.3238	106.9	-.0269	-8.2
1903	30	85.7			55.15	96.2			.3507	115.7		

LASTERS, MACHINE, Male.

[Data for employees from 15 establishments for entire period. Data for hours and wages from 10 establishments, 1890, 1891; 12 establishments, 1892; 14 establishments, 1893; 15 establishments, 1894; 16 establishments, 1895; 20 establishments, 1896; 23 establishments, 1897; 25 establishments, 1898; 31 establishments, 1899; 31 establishments, 1900; 32 establishments, 1901; 33 establishments, 1902, 1903.]

Av. 1890-99.	137	100.0	-42	-30.8	56.65	100.0	-1.29	-2.3	\$0.2339	100.0	+\$0.0468	+20.1
1890	75	54.8	-115	-84.7	56.34	99.5	-.37	-1.7	.2267	97.3	-.0529	-22.9
1891	85	61.7	-109	-80.8	56.74	100.2	-1.37	-2.4	.2284	98.1	-.0513	-22.3
1892	98	71.2	91	+66.9	56.62	100.0	-1.25	-2.2	.2357	101.2	-.0440	-18.7
1893	119	86.1	-79	-58.8	56.79	99.8	-1.13	-2.0	.2328	96.1	-.0559	-23.6
1894	140	102.4	-59	-43.4	56.98	100.6	-1.61	-2.8	.2359	101.3	-.0438	-18.9
1895	149	117.3	-49	-36.8	56.92	100.5	-1.55	-2.7	.2332	101.1	-.0465	-19.9
1896	160	126.0	-49	-36.8	56.9	100.5	-1.56	-2.7	.2419	103.9	-.0378	-15.4
1897	163	120.5	-56	-41.5	56.62	100.0	-1.25	-2.2	.2373	97.6	-.0524	-22.9
1898	127	100.0	-65	-48.8	55.81	98.6	-.46	-.8	.2419	103.9	-.0378	-15.4
1899	176	138.6	-13	-9.1	56.78	100.3	-1.11	-2.5	.2443	106.6	-.0354	-14.9
1900	189	148.8			55.91	98.8	-.56	-1.0	.2338	103.0	-.0389	-16.4
1901	171	131.6	18	+13.0	56.55	99.9	-1.18	-2.1	.2482	106.6	-.0315	-12.7
1902	161	126.0	-28	-20.1	55.77	98.5	-.40	-.7	.2545	114.4	-.0132	-5.0
1903	189	148.8			55.67	97.8			.2797	120.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 713.]

BOOTS AND SHOES—Continued.

McKAY STITCHERS, Male.

[Data for employees from 14 establishments for entire period. Data for hours and wages from 14 establishments, 1890; 16 establishments, 1891; 17 establishments, 1892; 19 establishments, 1893; 20 establishments, 1894-1896; 21 establishments, 1897; 23 establishments, 1898; 21 establishments, 1899; 25 establishments, 1900; 26 establishments, 1901-1903.]

Year.	Employees.				Hours per week.				Wages per hour.				
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.		
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.	
Av. 1890-99.	45	100.0	- 6	-13.3	57.17	100.0	-1.97	-3.4	\$0.3042	100.0	+\$0.0108	+ 3.6	
1890	35	77.8	+ 4	+11.4	58.11	101.6	-2.91	-5.0	.2889	95.0	+	.0261	+ 9.0
1891	36	80.0	+ 3	+ 8.3	58.05	101.5	-2.85	-4.9	.2862	94.1	+	.0288	+10.1
1892	47	104.4	- 8	-17.0	57.38	100.4	-2.18	-3.8	.3022	99.3	+	.0128	+ 4.2
1893	47	104.4	- 8	-17.0	57.41	100.4	-2.21	-3.8	.3175	104.4	-	.0025	- .8
1894	46	102.2	- 7	-15.2	57.05	99.8	-1.85	-3.2	.3061	100.6	+	.0089	+ 2.9
1895	50	111.1	-11	-22.0	57.31	100.2	-2.11	-3.7	.3174	104.3	-	.0024	- .8
1896	53	117.8	-14	-26.4	57.08	99.8	-1.88	-3.3	.3009	98.9	+	.0141	+ 4.7
1897	47	104.4	- 8	-17.0	56.64	99.1	-1.44	-2.5	.3079	101.2	+	.0071	+ 2.3
1898	46	102.2	- 7	-15.2	56.29	98.5	-1.09	-1.9	.3121	102.6	+	.0029	+ .9
1899	45	100.0	- 6	-13.3	56.35	98.6	-1.15	-2.0	.3029	99.6	+	.0121	+ 4.0
1900	41	97.8	- 5	-11.4	55.12	96.4	+ .08	+ 1.1	.3040	99.9	+	.0110	+ 3.6
1901	48	106.7	- 9	-18.8	56.00	98.0	- .80	-1.4	.3015	99.1	+	.0135	+ 4.5
1902	44	97.8	- 5	-11.4	55.31	96.7	- .11	- .2	.3062	100.7	+	.0088	+ 2.9
1903	39	86.7			55.20	96.6			.3150	103.6			

TREERS, Male.

[Data for employees from 13 establishments for entire period. Data for hours and wages from 13 establishments, 1890, 1891; 14 establishments, 1892; 15 establishments, 1893, 1894; 16 establishments, 1895, 1896; 17 establishments, 1897-1899; 19 establishments, 1900-1903.]

Av. 1890-99.	137	100.0	- 8	- 5.8	57.52	100.0	- 2.32	- 4.0	\$0.2144	100.0	+ \$0.0502	+ 23.4	
1890	88	64.2	+ 41	+ 46.6	57.60	100.1	- 2.40	- 4.2	.2174	101.4	+	.0472	+ 21.7
1891	111	83.2	+ 15	+ 13.2	57.92	100.7	- 2.72	- 4.7	.2086	97.4	+	.0558	+ 26.7
1892	108	78.8	+ 21	+ 19.4	57.19	99.4	- 1.99	- 3.5	.2118	98.8	+	.0528	+ 24.9
1893	118	108.0	- 19	- 12.8	56.95	99.0	- 1.75	- 3.1	.2152	100.4	+	.0194	+ 23.0
1894	141	102.9	- 12	- 8.5	57.35	99.7	- 2.15	- 3.7	.2174	101.4	+	.0472	+ 21.7
1895	147	107.3	- 18	- 12.2	58.02	100.9	- 2.52	- 4.9	.2163	100.9	+	.0483	+ 22.3
1896	167	121.9	- 38	- 22.8	57.71	100.3	- 2.51	- 4.3	.2179	101.6	+	.0467	+ 21.4
1897	157	114.6	- 28	- 17.8	57.46	99.9	- 2.26	- 3.9	.2099	97.9	+	.0547	+ 26.1
1898	155	113.1	- 26	- 16.8	57.67	100.3	- 2.47	- 4.3	.2094	97.7	+	.0552	+ 26.4
1899	141	102.9	- 12	- 8.5	57.32	99.7	- 2.12	- 3.7	.2200	102.6	+	.0446	+ 20.3
1900	114	105.1	- 15	- 10.4	57.31	99.6	- 2.11	- 3.7	.2314	107.9	+	.0332	+ 14.3
1901	119	108.8	- 20	- 13.4	57.43	99.8	- 2.23	- 3.9	.2261	105.5	+	.0385	+ 17.0
1902	125	91.2	+ 4	+ 3.2	56.48	98.2	- 1.28	- 2.8	.2359	110.0	+	.0287	+ 12.2
1903	120	91.2			55.20	96.0			.2616	123.4			

VAMPERS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890; 2 establishments, 1891, 1892; 4 establishments, 1893; 5 establishments, 1894, 1895; 4 establishments, 1896; 5 establishments, 1897, 1898; 7 establishments, 1899, 1900; 9 establishments, 1901; 11 establishments, 1902; 10 establishments, 1903.]

Av. 1890-99.	2	100.0	+1	+ 50.0	56.36	100.0	-3.43	-6.1	\$0.2473	100.0	+\$0.0671	+27.1	
1890	1	50.0	+2	+200.0	54.00	95.8	-1.07	-2.0	.2778	112.3	+	.0366	+13.1
1891	1	50.0	+2	+200.0	57.43	101.9	-4.50	-7.8	.2405	97.3	+	.0739	+30.7
1892	1	50.0	+2	+200.0	57.73	102.4	-4.80	-8.3	.2284	92.4	+	.0860	+37.7
1893	2	100.0	+1	+ 50.0	56.50	100.2	-3.57	-6.3	.2364	95.6	+	.0780	+33.0
1894	2	100.0	+1	+ 50.0	56.21	99.7	-3.28	-5.8	.2210	89.4	+	.0934	+42.3
1895	2	100.0	+1	+ 50.0	56.24	99.8	-3.31	-5.9	.2242	90.7	+	.0902	+40.2
1896	2	100.0	+1	+ 50.0	56.37	100.0	-3.44	-6.1	.2511	101.5	+	.0633	+25.2
1897	2	100.0	+1	+ 50.0	56.50	100.2	-3.57	-6.3	.2756	111.4	+	.0388	+14.1
1898	3	150.0			56.52	100.3	-3.59	-6.4	.2516	103.0	+	.0598	+23.5
1899	3	150.0			56.06	99.5	-3.13	-5.6	.2638	106.7	+	.0506	+19.2
1900	3	150.0			56.62	100.5	-3.69	-6.5	.2736	110.6	+	.0108	+14.9
1901	3	150.0			56.40	100.1	-3.47	-6.2	.2621	106.0	+	.0523	+20.0
1902	3	150.0			56.05	99.4	-3.12	-5.6	.2837	114.7	+	.0307	+10.8
1903	3	150.0			52.93	93.9			.3144	127.1			

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

BOOTS AND SHOES—Concluded.

VANLEPERS, Female.

[Data for employees from 16 establishments for entire period. Data for hours and wages from 15 establishments, 1890; 18 establishments, 1891; 19 establishments, 1892; 20 establishments, 1893; 22 establishments, 1894; 26 establishments, 1895, 1896; 27 establishments, 1897; 29 establishments, 1898; 33 establishments, 1899; 34 establishments, 1900, 1901; 35 establishments, 1902; 83 establishments, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	116	100.0	+62	+53.4	57.28	100.0	-0.87	-1.5	\$0.1910	100.0	+\$0.0200	-10.5
1890.	119	102.6	+59	+49.0	57.49	100.4	-1.06	-1.9	1909	99.9	+0.0201	-10.5
1891.	106	91.4	+72	+67.7	57.42	100.2	-1.01	-1.8	1789	93.7	+0.0321	-17.9
1892.	109	94.0	+69	+63.7	57.51	100.4	-1.10	-1.9	1878	98.3	+0.0322	-12.4
1893.	107	92.2	+71	+66.7	57.33	100.1	-0.92	-1.6	1941	101.6	+0.0169	-8.7
1894.	110	94.8	+68	+61.8	57.21	99.9	-0.83	-1.5	1954	102.3	+0.0156	-8.0
1895.	119	102.6	+59	+49.0	57.25	99.9	-0.84	-1.5	1972	103.2	+0.0138	-7.0
1896.	118	101.7	+60	+50.8	57.07	99.6	-0.66	-1.2	1948	102.0	+0.0162	-8.3
1897.	122	105.2	+56	+45.9	57.02	99.5	-0.61	-1.1	1925	100.8	+0.0185	+9.6
1898.	120	103.4	+58	+48.3	57.31	100.1	-0.90	-1.6	1898	99.4	+0.0212	-11.2
1899.	132	113.8	+46	+34.8	57.17	99.8	-0.76	-1.3	1881	98.6	+0.0229	-12.2
1900.	141	121.6	+37	+26.2	57.11	99.7	-0.70	-1.2	1968	103.0	+0.0142	+7.2
1901.	151	130.2	+27	+17.9	57.06	99.6	-0.65	-1.1	1984	103.9	+0.0136	-6.4
1902.	163	140.5	+15	+9.2	56.82	99.2	-0.41	-0.7	1996	104.5	+0.0114	+5.7
1903.	178	153.4			56.41	98.5			2110	110.5		

BOOTS AND SHOES, RUBBER.

BOOTMAKERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	30	100.0	+3	+10.0	60.00	100.0			\$0.2997	100.0	+\$0.0683	-23.6
1890.	32	106.7	+1	+3.1	60.00	100.0			3053	105.4	+0.0627	+17.3
1891.	39	130.0	+3	+10.0	60.00	100.0			2940	101.5	+0.0640	-21.9
1892.	31	103.3	+2	+6.5	60.00	100.0			3056	105.5	+0.0521	-17.1
1893.	34	113.3	1	-2.9	60.00	100.0			2976	102.7	+0.0604	-20.3
1894.	31	103.3	+2	+6.5	60.00	100.0			2938	101.4	+0.0612	-21.9
1895.	31	103.3	+2	+6.5	60.00	100.0			2940	101.5	+0.0640	-21.8
1896.	25	83.3	+8	+32.0	60.00	100.0			2631	90.8	+0.0949	-36.1
1897.	31	103.3	+2	+6.5	60.00	100.0			3186	110.0	+0.0594	-12.4
1898.	29	96.7	+1	+3.8	60.00	100.0			2855	98.6	+0.0725	-25.4
1899.	29	96.7	+1	+3.8	60.00	100.0			2397	82.7	+0.1183	-49.4
1900.	29	96.7	+1	+3.8	60.00	100.0			2849	98.3	+0.0731	-25.7
1901.	25	83.3	+8	+32.0	60.00	100.0			2863	102.3	+0.0617	-20.8
1902.	23	76.7	+10	+43.5	60.00	100.0			3146	110.0	+0.0594	-12.4
1903.	37	123.3			60.00	100.0			3590	123.6		

CEMENTERS, Female.

[Data from 1 establishment.]

Av. 1890-99.	21	100.0	+14	+66.7	60.00	100.0			\$0.1394	100.0	-\$0.0662	-3.7
1890.	8	38.1	+25	+157.5	60.00	100.0			1105	109.8	+0.0923	-4.5
1891.	14	66.7	+21	+150.0	60.00	100.0			1182	106.3	+0.0140	-9.4
1892.	18	85.7	+17	+94.4	60.00	100.0			1062	118.2	+0.0536	-19.3
1893.	18	85.7	+17	+94.4	60.00	100.0			1192	85.5	+0.0150	-12.6
1894.	22	104.8	+16	+94.4	60.00	100.0			1154	97.1	+0.0012	-1.9
1895.	23	109.5	+12	+52.2	60.00	100.0			1387	99.4	+0.0043	-3.1
1896.	15	71.4	+9	+133.3	60.00	100.0			1074	76.8	+0.0271	+25.3
1897.	28	133.3	+7	+25.0	60.00	100.0			1103	100.6	+0.0061	-4.3
1898.	28	133.3	+7	+25.0	60.00	100.0			1335	110.1	+0.0193	-12.6
1899.	28	133.3	+7	+25.0	60.00	100.0			1475	104.4	+0.0113	-7.8
1900.	21	100.0	+14	+66.7	60.00	100.0			1110	79.6	+0.0232	+20.9
1901.	33	157.1	+2	+6.1	60.00	100.0			1284	92.1	+0.0058	+4.5
1902.	36	171.4	+1	+2.8	60.00	100.0			1600	114.8	+0.0236	-16.1
1903.	55	261.9			60.00	100.0			1312	96.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BOOTS AND SHOES, RUBBER—Continued.

CUTTERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	31	100.0	+4	+12.9	59.52	100.0	+0.08	+0.1	\$0.2771	100.0	\$+0.0256	+9.2
1890	30	96.8	+5	+16.7	59.53	100.0	+ .07	+ .1	.2702	97.5	+ .0325	+12.0
1891	30	96.8	+5	+16.7	59.53	100.0	+ .07	+ .1	.2686	96.9	+ .0341	+12.7
1892	30	96.8	+5	+16.7	59.50	100.0	+ .10	+ .2	.2633	95.0	+ .0394	+15.0
1893	30	96.8	+5	+16.7	59.50	100.0	+ .10	+ .2	.2713	97.9	+ .0314	+11.6
1894	30	96.8	+5	+16.7	59.50	100.0	+ .10	+ .2	.2734	98.7	+ .0293	+10.7
1895	31	100.0	+4	+12.9	59.52	100.0	+ .08	+ .1	.2887	104.2	+ .0140	+4.8
1896	30	96.8	+5	+16.7	59.50	100.0	+ .10	+ .2	.2641	95.3	+ .0386	+14.6
1897	29	93.5	+6	+20.7	59.52	100.0	+ .08	+ .1	.2915	105.2	+ .0112	+3.8
1898	33	106.5	+2	+6.1	59.55	100.1	+ .05	+ .1	.2712	97.9	+ .0315	+11.6
1899	33	106.5	+2	+6.1	59.55	100.1	+ .05	+ .1	.3083	111.3	+ .0056	+1.8
1900	34	109.7	+1	+2.9	59.56	100.1	+ .04	+ .1	.2809	103.5	+ .0158	+5.5
1901	32	103.2	+3	+9.4	59.59	100.1	+ .01	+ .02	.3074	110.9	+ .0047	+1.5
1902	34	109.7	+1	+2.9	59.53	100.0	+ .07	+ .1	.2838	102.2	+ .0194	+6.8
1903	35	112.9			59.60	100.1			.3027	109.2		

GRINDERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	31	100.0	+2	+6.5	59.00	100.0			\$0.1525	100.0		
1890	25	80.6	+8	+32.0	59.00	100.0			.1525	100.0		
1891	30	96.8	+8	+10.0	59.00	100.0			.1525	100.0		
1892	33	106.5			59.00	100.0			.1525	100.0		
1893	28	90.3	+5	+17.9	59.00	100.0			.1525	100.0		
1894	35	112.9	-2	-5.7	59.00	100.0			.1525	100.0		
1895	30	96.8	+3	+10.0	59.00	100.0			.1525	100.0		
1896	30	96.8	+3	+10.0	59.00	100.0			.1525	100.0		
1897	33	106.5			59.00	100.0			.1525	100.0		
1898	34	109.7	-1	-2.9	59.00	100.0			.1525	100.0		
1899	30	96.8	+3	+10.0	59.00	100.0			.1525	100.0		
1900	35	112.9	-2	-5.7	59.00	100.0			.1525	100.0		
1901	33	106.5			59.00	100.0			.1525	100.0		
1902	30	96.8	+3	+10.0	59.00	100.0			.1525	100.0		
1903	33	106.5			59.00	100.0			.1525	100.0		

MIXERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	14	100.0	+1	+7.1	59.07	100.0			\$0.1611	100.0	+\$0.0031	+1.9
1890	15	107.1			59.07	100.0			.1600	99.3	+ .0042	+2.6
1891	13	92.9	+2	+15.4	59.06	100.0	-0.01	-0.02	.1602	99.4	+ .0040	+2.5
1892	16	114.3	-1	-6.3	59.06	100.0	+ .01	+ .02	.1603	99.5	+ .0039	+2.4
1893	16	114.3	-1	-6.3	59.06	100.0	+ .01	+ .02	.1595	99.0	+ .0047	+2.9
1894	13	92.9	+2	+15.4	59.06	100.0	-0.01	-0.02	.1602	99.4	+ .0040	+2.5
1895	13	92.9	+2	+15.4	59.06	100.0	-0.01	-0.02	.1609	99.9	+ .0033	+2.1
1896	14	100.0	+1	+7.1	59.07	100.0			.1613	100.1	+ .0029	+1.8
1897	12	85.7	+3	+25.0	59.06	100.0	-0.01	-0.02	.1616	100.3	+ .0026	+1.6
1898	15	107.1			59.07	100.0			.1633	101.4	+ .0009	+ .6
1899	15	107.1			59.07	100.0			.1633	101.4	+ .0009	+ .6
1900	15	107.1			59.07	100.0			.1642	101.9		
1901	15	107.1			59.07	100.0			.1633	101.4	+ .0009	+ .6
1902	16	114.3	-1	-6.3	59.06	100.0	+ .01	+ .02	.1627	101.0	+ .0015	+ .9
1903	15	107.1			59.07	100.0			.1642	101.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BOOTS AND SHOES, RUBBER—Concluded.

SHOEMAKERS, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	120	100.0	+ 65	+ 54.2	60.00	100.0			\$0.1245	100.0	-\$0.0089	+ 7.
1890	121	100.8	+ 64	+ 52.9	60.00	100.0			.1231	98.9 +	.0103	+ 8.
1891	109	90.8	+ 76	+ 69.7	60.00	100.0			.1221	98.1 +	.0113	+ 9.
1892	111	92.5	+ 74	+ 66.7	60.00	100.0			.1242	99.8 +	.0092	+ 7.
1893	132	110.0	+ 53	+ 40.2	60.00	100.0			.1258	101.0 +	.0076	+ 6.
1894	120	100.0	+ 65	+ 54.2	60.00	100.0			.1198	96.2 +	.0136	+ 11.
1895	130	108.3	+ 55	+ 42.3	60.00	100.0			.1263	103.1 +	.0051	+ 4.
1896	93	77.5	+ 92	+ 98.9	60.00	100.0			.1260	101.2 +	.0074	+ 5.
1897	130	108.3	+ 55	+ 42.3	60.00	100.0			.1252	100.6 +	.0082	+ 6.
1898	142	118.3	+ 43	+ 30.3	60.00	100.0			.1277	102.6 +	.0057	+ 4.
1899	114	95.0	+ 71	+ 62.3	60.00	100.0			.1231	98.9 +	.0103	+ 8.
1900	179	149.2	+ 6	+ 3.4	60.00	100.0			.1261	101.3 +	.0073	+ 5.
1901	164	136.7	+ 21	+ 12.8	60.00	100.0			.1267	96.9 +	.0127	+ 10.
1902	181	150.8	+ 4	+ 2.2	60.00	100.0			.1244	99.9 +	.0090	+ 7.2
1903	185	154.2			60.00	100.0			.1334	107.1		

BOXES, PAPER.

BOX MAKERS, MACHINE, Male.

[Data from 1 establishment.]

Av. 1890-99.	13	100.0	+ 3	+ 23.1	60.00	100.0			\$0.0731	100.0	-\$0.0248	- 33.
1890	10	76.9	+ 6	+ 60.0	60.00	100.0			.0750	102.6 +	.0229	+ 30.
1891	10	76.9	+ 6	+ 60.0	60.00	100.0			.0717	98.1 +	.0262	+ 36.
1892	11	84.6	+ 5	+ 45.5	60.00	100.0			.0712	97.4 +	.0267	+ 37.
1893	12	92.3	+ 4	+ 33.3	60.00	100.0			.0736	100.7 +	.0243	+ 33.
1894	13	100.0	+ 3	+ 23.1	60.00	100.0			.0730	102.6 +	.0229	+ 30.
1895	13	100.0	+ 3	+ 23.1	60.00	100.0			.0750	102.6 +	.0229	+ 30.
1896	14	107.7	+ 2	+ 11.5	60.00	100.0			.0730	102.6 +	.0229	+ 30.
1897	16	123.1			60.00	100.0			.0688	94.1 +	.0291	+ 42.
1898	16	123.1			60.00	100.0			.0688	94.1 +	.0291	+ 42.
1899	16	123.1			60.00	100.0			.0771	105.5 +	.0208	+ 27.
1900	18	138.5	+ 2	+ 11.1	60.00	100.0			.0843	115.3 +	.0136	+ 16.
1901	17	130.8	+ 1	+ 5.9	60.00	100.0			.0833	116.7 +	.0126	+ 14.
1902	16	123.1			60.00	100.0			.0958	131.1 +	.0021	+ 2.
1903	16	123.1			60.00	100.0			.0979	133.9		

CLAMPERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	2	100.0			59.00	100.0			\$0.2634	100.0		
1890	1	50.0	1	100.0	59.00	100.0			.2634	100.0		
1891	1	50.0	1	100.0	59.00	100.0			.2634	100.0		
1892	1	50.0	1	100.0	59.00	100.0			.2634	100.0		
1893	2	100.0			59.00	100.0			.2634	100.0		
1894	2	100.0			59.00	100.0			.2634	100.0		
1895	2	100.0			59.00	100.0			.2634	100.0		
1896	2	100.0			59.00	100.0			.2634	100.0		
1897	2	100.0			59.00	100.0			.2634	100.0		
1898	2	100.0			59.00	100.0			.2634	100.0		
1899	2	100.0			59.00	100.0			.2634	100.0		
1900	2	100.0			59.00	100.0			.2634	100.0		
1901	2	100.0			59.00	100.0			.2634	100.0		
1902	2	100.0			59.00	100.0			.2634	100.0		
1903	2	100.0			59.00	100.0			.2634	100.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BOXES, PAPER—Continued.

CLAMPERS, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	2	100.0			59.00	100.0			\$0.1356	100.0		
1890	1	50.0	-1	+100.0	59.00	100.0			.1356	100.0		
1891	1	50.0	-1	+100.0	59.00	100.0			.1356	100.0		
1892	1	50.0	+1	+100.0	59.00	100.0			.1356	100.0		
1893	2	100.0			59.00	100.0			.1356	100.0		
1894	2	100.0			59.00	100.0			.1356	100.0		
1895	1	50.0	-1	+100.0	59.00	100.0			.1356	100.0		
1896	2	100.0			59.00	100.0			.1356	100.0		
1897	1	50.0	-1	+100.0	59.00	100.0			.1356	100.0		
1898	2	100.0			59.00	100.0			.1356	100.0		
1899	2	100.0			59.00	100.0			.1356	100.0		
1900	2	100.0			59.00	100.0			.1356	100.0		
1901	2	100.0			59.00	100.0			.1356	100.0		
1902	2	100.0			59.00	100.0			.1356	100.0		
1903	2	100.0			59.00	100.0			.1356	100.0		

CORNER CUTTERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	7	100.0	+2	+28.6	59.40	100.0	-2.62	-4.4	\$0.1650	100.0	+\$0.0180	+10.8
1890	5	71.4	+4	+80.0	59.40	100.0	-2.62	-4.4	.1649	99.9	+.0191	+11.6
1891	5	71.4	+4	+80.0	59.40	100.0	-2.62	-4.4	.1683	102.0	+.0157	+9.3
1892	6	85.7	+3	+50.0	59.33	99.9	-2.55	-4.3	.1769	107.2	+.0071	+4.0
1893	6	85.7	+3	+50.0	59.33	99.9	-2.55	-4.3	.1769	107.2	+.0071	+4.0
1894	6	85.7	+3	+50.0	59.50	100.2	-2.72	-4.6	.1626	98.5	+.0214	+13.2
1895	7	100.0	+2	+28.6	59.43	100.1	-2.65	-4.5	.1684	102.1	+.0156	+9.3
1896	7	100.0	+2	+28.6	59.43	100.1	-2.65	-4.5	.1650	100.0	+.0180	+10.8
1897	8	114.3	+1	+12.5	59.38	100.0	-2.60	-4.4	.1497	90.7	+.0343	+22.9
1898	7	100.0	+2	+28.6	59.43	100.1	-2.65	-4.5	.1492	90.4	+.0348	+23.3
1899	8	114.3	+1	+12.5	59.38	100.0	-2.60	-4.4	.1635	102.1	+.0155	+9.2
1900	9	128.6			59.44	100.1	-2.66	-4.5	.1571	95.2	+.0269	+17.1
1901	9	128.6			59.44	100.1	-2.66	-4.5	.1739	105.4	+.0101	+5.8
1902	9	128.6			59.44	100.1	-2.66	-4.5	.1664	100.8	+.0176	+10.6
1903	9	128.6			56.78	95.6			.1840	111.5		

CORNER STAYERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	2	100.0	+1	+50.0	59.00	100.0			\$0.1238	100.0	+\$0.0005	+0.4
1890	2	100.0	+1	+50.0	59.00	100.0			.1187	95.9	+.0056	+4.7
1891	2	100.0	+1	+50.0	59.00	100.0			.1187	95.9	+.0056	+4.7
1892	2	100.0	+1	+50.0	59.00	100.0			.1271	102.7	+.0028	+2.2
1893	1	50.0	-2	+200.0	59.00	100.0			.1356	109.5	-.0113	-8.3
1894	2	100.0	+1	+50.0	59.00	100.0			.1187	95.9	+.0056	+4.7
1895	1	50.0	+2	+200.0	59.00	100.0			.1017	82.1	+.0226	+22.2
1896	2	100.0	+1	+50.0	59.00	100.0			.1102	89.0	+.0141	+12.8
1897	2	100.0	+1	+50.0	59.00	100.0			.1356	109.5	-.0113	-8.3
1898	1	50.0	+2	+200.0	59.00	100.0			.1356	109.5	-.0113	-8.3
1899	2	100.0	-1	+50.0	59.00	100.0			.1356	109.5	-.0113	-8.3
1900	1	50.0	+2	+200.0	59.00	100.0			.1525	123.2	-.0282	-18.5
1901	1	50.0	+2	+200.0	59.00	100.0			.1525	123.2	-.0282	-18.5
1902	3	150.0			59.00	100.0			.1856	109.5	-.0113	-8.3
1903	3	150.0			59.00	100.0			.1243	100.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899 =100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

BOXES, PAPER—Continued.

FINISHERS, Female.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Rela-tive number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	71	100.0	-15	-21.1	59.65	100.0	-0.56	-0.9	\$0.0775	100.0	\$0.0224	-28.4
1890	77	108.5	-21	-27.3	59.69	100.1	-0.60	-1.0	.0766	98.5	.0223	-30.4
1891	78	109.9	-22	-28.2	59.64	100.0	-0.55	-0.9	.0781	100.8	.0218	-27.4
1892	76	107.0	-20	-26.3	59.72	100.1	-0.63	-1.1	.0774	99.9	.0225	-29.1
1893	71	100.0	-15	-21.1	59.65	100.0	-0.54	-0.9	.0779	100.5	.0220	-28.2
1894	71	100.0	-15	-21.1	59.68	100.1	-0.59	-1.0	.0770	99.4	.0229	-29.5
1895	70	98.6	-14	-20.0	59.69	100.1	-0.66	-1.0	.0754	97.3	.0245	-32.5
1896	71	100.0	-15	-21.1	59.68	100.1	-0.59	-1.0	.0754	97.3	.0245	-32.5
1897	72	101.4	-16	-22.2	59.63	100.0	-0.54	-0.9	.0762	98.3	.0237	-31.1
1898	73	102.8	-17	-23.3	59.59	99.9	-0.50	-0.8	.0765	98.7	.0234	-30.6
1899	66	93.8	-10	-15.7	59.50	99.7	-0.41	-0.7	.0848	109.4	.0151	-17.9
1900	65	91.4	-11	-15.4	59.56	99.8	-0.47	-0.8	.0871	112.4	.0128	-14.5
1901	65	91.4	-11	-15.4	59.51	99.8	-0.42	-0.7	.0942	121.5	.0067	-6.1
1902	61	85.9	-5	-8.2	59.41	99.6	-0.32	-0.5	.0928	119.7	.0071	-7.7
1903	56	78.9			59.09	99.1			.0999	128.9		

GLUERS, Female.

[Data from 1 establishment.]

Av. 1890-99.	2	100.0			59.00	100.0			\$0.1187	100.0	\$0.0012	-6.4
1890	2	100.0			59.00	100.0			.1568	135.4	.0069	-4.4
1891	2	100.0			59.00	100.0			.1573	135.8	.0074	-4.7
1892	2	100.0			59.00	100.0			.1584	136.5	.0085	-3.4
1893	1	50.0	1	100.0	59.00	100.0			.1621	139.2	.0125	-7.7
1894	2	100.0			59.00	100.0			.1420	85.5	.0179	-3.4
1895	2	100.0			59.00	100.0			.1589	136.9	.0090	-3.7
1896	2	100.0			59.00	100.0			.1438	96.7	.0061	-4.2
1897	2	100.0			59.00	100.0			.1329	84.1	.0100	-7.1
1898	2	100.0			59.00	100.0			.1376	92.5	.0123	-8.1
1899	2	100.0			59.00	100.0			.1302	87.6	.0197	-13.1
1900	2	100.0			59.00	100.0			.1416	97.2	.0153	-8.3
1901	2	100.0			59.00	100.0			.1473	99.1	.0088	-1.9
1902	2	100.0			59.00	100.0			.1427	98.0	.0072	-5.0
1903	2	100.0			59.00	100.0			.1499	100.8		

JOINERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	7	100.0			41.00	100.0			\$0.1078	100.0	\$0.0131	-7.9
1890	7	100.0			41.00	100.0			.1101	92.4	.0128	-16.9
1891	7	100.0			41.00	100.0			.1088	100.6	.0121	-7.7
1892	7	100.0			41.00	100.0			.1082	97.3	.0177	-10.9
1893	7	100.0			41.00	100.0			.1065	99.2	.0144	-8.4
1894	7	100.0			41.00	100.0			.1074	102.1	.0095	-5.5
1895	7	100.0			41.00	100.0			.1071	97.8	.0168	-10.5
1896	8	114.3			41.00	100.0			.1047	97.0	.0182	-11.5
1897	8	114.3			41.00	100.0			.1070	100.7	.0149	-7.4
1898	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5
1899	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5
1900	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5
1901	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5
1902	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5
1903	8	114.3			41.00	100.0			.1070	102.0	.0197	-5.5

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BOXES, PAPER—Continued.

LIMERS, MACHINE, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	2	100.0			59.00	100.0			\$0.1313	100.0	+\$0.0048	+ 3.3
1890	1	50.0	+1	+100.0	59.00	100.0			.1186	90.3	+ .0170	+14.8
1891	1	50.0	+1	+100.0	59.00	100.0			.1356	103.3		
1892	1	50.0	+1	+100.0	59.00	100.0			.1525	116.1	- .0169	-11.1
1893	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1894	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1895	2	100.0			59.00	100.0			.1356	103.3		
1896	2	100.0			59.00	100.0			.1356	103.3		
1897	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1898	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1899	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1900	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1901	2	100.0			59.00	100.0			.1271	96.8	+ .0085	+ 6.7
1902	2	100.0			59.00	100.0			.1356	103.3		
1903	2	100.0			59.00	100.0			.1356	103.3		

PAPER CUTTERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	13	100.0			56.20	100.0	-0.51	-0.9	\$0.2727	100.0	-\$0.0172	-6.3
1890	14	107.7	-1	-7.1	56.79	101.0	-1.10	-1.9	.2616	95.9	- .0061	-2.8
1891	14	107.7	-1	-7.1	56.79	101.0	-1.10	-1.9	.2616	95.9	- .0061	-2.3
1892	12	92.3	+1	+8.3	55.92	99.6	-.28	-.4	.2724	99.9	- .0169	-6.2
1893	12	92.3	+1	+8.3	56.00	99.6	-.31	-.6	.2808	103.0	- .0258	-9.0
1894	13	100.0			55.85	99.4	-.16	-.3	.2748	100.8	- .0198	-7.0
1895	13	100.0			56.23	100.1	-.54	-1.0	.2690	98.6	- .0136	-5.0
1896	13	100.0			56.23	100.1	-.54	-1.0	.2727	100.0	- .0172	-6.3
1897	12	92.3	+1	+8.3	56.00	99.6	-.31	-.6	.2711	99.4	- .0156	-5.8
1898	11	84.6	+2	+18.2	56.18	100.0	-.49	-.9	.2821	103.4	- .0266	-9.4
1899	12	92.3	+1	+8.3	56.00	99.6	-.31	-.6	.2804	102.8	- .0249	-8.9
1900	11	84.6	+2	+18.2	56.18	100.0	-.49	-.9	.2791	102.3	- .0236	-8.5
1901	12	92.3	+1	+8.3	56.42	100.4	-.73	-1.3	.2678	98.2	- .0123	-4.6
1902	12	92.3	+1	+8.3	56.42	100.4	-.73	-1.3	.2706	99.2	- .0151	-5.6
1903	13	100.0			55.69	99.1			.2555	93.7		

SCORERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	11	100.0	+1	+36.4	59.43	100.0	-2.76	-4.6	\$0.2390	100.0	+\$0.0209	+ 8.7
1890	7	63.6	+8	+114.3	59.43	100.0	-2.76	-4.6	.2571	107.6	+ .0028	+ 1.1
1891	9	81.8	+6	+66.7	59.44	100.0	-2.77	-4.7	.2429	101.6	+ .0170	+ 7.0
1892	10	90.9	+5	+50.0	59.50	100.1	-2.83	-4.8	.2320	97.1	+ .0279	+12.0
1893	10	90.9	+5	+50.0	59.50	100.1	-2.83	-4.8	.2470	99.2	+ .0229	+ 9.7
1894	12	109.1	+3	+25.0	59.42	100.0	-2.75	-4.6	.2570	99.2	+ .0229	+ 9.7
1895	12	109.1	+3	+25.0	59.42	100.0	-2.75	-4.6	.2357	98.6	+ .0242	+10.8
1896	12	109.1	+3	+25.0	59.42	100.0	-2.75	-4.6	.2384	99.7	+ .0215	+ 9.0
1897	12	109.1	+3	+25.0	59.42	100.0	-2.75	-4.6	.2396	99.8	+ .0213	+ 8.9
1898	10	90.9	+5	+50.0	59.40	99.9	-2.73	-4.6	.2474	99.3	+ .0225	+ 9.5
1899	11	100.0	+4	+36.4	59.36	99.9	-2.69	-4.5	.2343	98.0	+ .0236	+10.9
1900	11	100.0	+4	+36.4	59.36	99.9	-2.69	-4.5	.2481	103.8	+ .0118	+ 4.8
1901	14	127.3	+1	+7.1	59.43	100.0	-2.76	-4.6	.2548	106.6	+ .0051	+ 2.0
1902	15	136.4			59.47	100.1	-2.80	-4.7	.2511	105.1	+ .0088	+ 3.5
1903	15	136.4			56.67	95.4			.2599	108.7		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (−) in 1903, as compared with previous years, see note on page 718.]

BOXES, PAPER—Concluded.

TRIMMERS, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.				
	Num-ber.	Relative num-ber.	Increase (+) or decrease (−) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (−) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (−) in 1903 as compared with year specified.		
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.	
Av. 1890-99.	5	100.0			59.00	100.0			\$0.0852	100.0	+\$0.0091	+10.	
1890	5	100.0			59.00	100.0			.0911	106.9	+	.0032	+3.
1891	5	100.0			59.00	100.0			.0879	103.2	+	.0064	+7.
1892	5	100.0			59.00	100.0			.0938	110.1	+	.0005	+
1893	5	100.0			59.00	100.0			.0653	76.6	+	.0290	+44.
1894	4	80.0	+1	+25.0	59.00	100.0			.0823	96.6	+	.0120	+14.
1895	3	60.0	+2	+66.7	59.00	100.0			.0979	114.9	−	.0036	−3.
1896	2	60.0	+2	+66.7	59.00	100.0			.0853	100.1	−	.0090	+10.
1897	5	100.0			59.00	100.0			.0790	92.7	+	.0153	+19.
1898	5	100.0			59.00	100.0			.0819	96.1	+	.0124	+15.
1899	5	100.0			59.00	100.0			.0879	103.2	+	.0064	+7.
1900	4	80.0	+1	+25.0	59.00	100.0			.0809	95.0	+	.0134	+16.
1901	4	80.0	+1	+25.0	59.00	100.0			.0774	90.8	+	.0169	+21.
1902	4	80.0	+1	+25.0	59.00	100.0			.0927	108.8	+	.0016	+1.
1903	5	100.0			59.00	100.0			.0943	110.7			

BRICK.

BRICK-MACHINE TENDERS, Male.

[Data from 20 establishments.]

Av. 1890-99.	126	100.0	+12	+9.5	58.71	100.0	−0.28	−0.5	\$0.1736	100.0	+ \$0.0224	+12.	
1890	125	99.2	+13	+10.4	58.70	100.0	−.27	−.5	.1735	99.9	+	.0225	+13.
1891	127	100.8	+11	+8.7	58.63	99.9	−.20	−.3	.1729	99.6	+	.0231	+13.
1892	126	100.0	+12	+9.5	58.62	99.8	−.19	−.3	.1788	103.0	−	.0172	+9.
1893	124	98.4	+14	+11.3	58.69	100.0	−.26	−.4	.1766	101.7	−	.0194	+11.
1894	125	99.2	+13	+10.4	58.70	100.0	−.27	−.5	.1708	98.4	−	.0252	+14.
1895	125	99.2	+13	+10.4	58.70	100.0	−.27	−.5	.1697	97.8	−	.0263	+15.
1896	125	99.2	+13	+10.4	58.75	100.1	−.32	−.5	.1712	98.6	−	.0248	+14.
1897	125	99.2	+13	+10.4	58.75	100.1	−.32	−.5	.1689	97.3	+	.0271	+16.
1898	127	100.8	+11	+8.7	58.77	100.1	−.34	−.6	.1746	100.6	+	.0214	+12.
1899	129	102.4	+9	+7.0	58.79	100.1	−.36	−.6	.1791	103.2	−	.0169	+9.
1900	130	103.2	+8	+6.2	58.80	100.2	−.37	−.6	.1815	104.6	+	.0145	+8.
1901	128	101.6	+10	+7.8	58.88	100.3	−.45	−.8	.1850	106.6	+	.0110	+6.
1902	131	104.0	+7	+5.3	58.81	100.2	−.38	−.6	.1932	111.3	+	.0028	+1.
1903	138	109.5			58.43	99.5			.1960	112.9			

KILN BURNERS, Male.

[Data from 22 establishments.]

Av. 1890-99.	100	100.0	+ 9	+ 9.0	74.68	100.0	- 1.04	- 1.4	\$0.2033	100.0	- \$0.0324	- 15.
1890	100	100.0	+ 9	+ 9.0	74.81	100.2	- 1.17	- 1.6	.2046	100.6	- .0311	- 15.
1891	100	100.0	+ 9	+ 9.0	74.81	100.2	- 1.17	- 1.6	.2057	101.2	- .0300	+ 14.
1892	99	99.0	+ 10	+ 10.1	74.96	100.4	- 1.32	- 1.8	.2044	100.5	- .0313	+ 15.
1893	101	101.0	+ 8	+ 7.9	74.66	100.0	- 1.02	- 1.4	.2035	100.1	- .0322	+ 15.
1894	96	96.0	+ 13	+ 13.5	74.93	100.3	- 1.29	- 1.7	.1935	95.2	+ .0422	+ 21.
1895	100	100.0	+ 9	+ 9.0	74.33	99.5	- .69	- .9	.2014	99.1	- .0343	+ 17.
1896	98	98.0	+ 11	+ 11.2	74.62	99.9	- .98	- 1.3	.1955	96.2	+ .0402	+ 20.
1897	102	102.0	+ 7	+ 6.9	74.65	99.2	- .41	- .6	.2074	102.0	- .0283	+ 13.
1898	102	102.0	+ 7	+ 6.9	74.52	99.8	- .88	- 1.2	.2118	104.2	- .0259	+ 11.
1899	98	98.0	+ 11	+ 11.2	75.11	100.6	- 1.17	- 2.0	.2056	101.1	+ .0301	+ 14.
1900	103	103.0	+ 6	+ 5.8	74.38	99.6	- .74	- 1.0	.2120	104.8	- .0227	+ 10.
1901	106	106.0	+ 3	+ 2.8	73.97	99.0	- .33	- .4	.2235	109.9	- .0122	+ 6.
1902	108	108.0	+ 1	+ 1.9	74.16	99.3	- .52	- .7	.2313	113.8	+ .0044	+ 1.
1903	109	109.0			73.64	98.6			.2357	115.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BRICK—Continued.

KILN SETTERS, Male.

[Data from 24 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	101	100.0	+14	+13.9	58.19	100.0	-0.22	-0.4	\$0.1935	100.0	+\$0.0143	+ 7.4
1890	98	97.0	+17	+17.3	57.99	99.7	-.02	-.03	1920	99.2	+.0158	+ 8.2
1891	91	90.1	+24	+26.4	58.10	99.8	-.13	-.2	1929	99.7	+.0149	+ 7.7
1892	96	95.0	+19	+19.8	58.07	99.8	-.10	-.2	2029	104.9	+.0049	+ 2.4
1893	103	102.0	+12	+11.7	58.09	99.8	-.12	-.2	1932	99.8	+.0146	+ 7.6
1894	99	98.0	+16	+16.2	58.25	100.1	-.28	-.5	1926	99.5	+.0152	+ 7.9
1895	99	98.0	+16	+16.2	58.37	100.3	-.40	-.7	1892	97.8	+.0186	+ 9.8
1896	103	102.0	+12	+11.7	58.15	99.9	-.18	-.3	1895	97.9	+.0183	+ 9.7
1897	104	103.0	+11	+10.6	58.22	100.1	-.25	-.4	1867	96.5	+.0211	+11.3
1898	103	102.0	+12	+11.7	58.32	100.2	-.35	-.6	1972	101.9	+.0106	+ 5.4
1899	110	108.9	+ 5	+ 4.5	58.32	100.2	-.35	-.6	1987	102.7	+.0091	+ 4.6
1900	107	105.9	+ 8	+ 7.5	58.38	100.3	-.41	-.7	1991	102.9	+.0087	+ 4.4
1901	108	106.9	+ 7	+ 6.5	58.51	100.5	-.54	-.9	1958	101.2	+.0120	+ 6.1
1902	110	108.9	+ 5	+ 4.5	58.43	100.4	-.46	-.8	2069	106.9	+.0009	+ .4
1903	113	113.9	.....	.....	57.97	99.6	.....	.....	2078	107.4	.....	.....

LABORERS, Male.

[Data from 11 establishments.]

Av. 1890-99.	305	100.0	+58	+19.0	62.10	100.0	-0.92	-1.5	\$0.1210	100.0	+\$0.0155	+12.9
1890	286	93.8	+77	+26.9	61.66	99.3	-.48	-.8	1258	104.0	+.0107	+ 8.5
1891	297	97.4	+66	+22.2	62.00	99.8	-.82	-1.3	1237	102.2	+.0128	+10.3
1892	302	99.0	+61	+20.2	61.97	99.8	-.79	-1.3	1237	102.2	+.0128	+10.3
1893	311	102.0	+52	+16.7	62.30	100.3	-1.12	-1.8	1220	100.8	+.0145	+11.9
1894	314	103.0	+49	+15.6	62.28	100.3	-1.10	-1.8	1203	99.4	+.0162	+13.5
1895	310	101.6	+53	+17.1	62.31	100.3	-1.13	-1.8	1175	97.1	+.0190	+16.2
1896	299	98.0	+64	+21.4	61.99	99.8	-.81	-1.3	1196	98.8	+.0169	+14.1
1897	299	98.0	+64	+21.4	61.99	99.8	-.81	-1.3	1196	98.8	+.0169	+14.1
1898	305	100.0	+58	+19.0	62.34	100.4	-1.16	-1.9	1174	97.0	+.0191	+16.3
1899	327	107.2	+36	+11.0	62.19	100.1	-1.01	-1.6	1202	99.3	+.0163	+13.6
1900	318	104.3	+45	+14.2	61.87	99.6	-.69	-1.1	1234	102.0	+.0131	+10.6
1901	322	105.6	+41	+12.7	61.85	99.6	-.67	-1.1	1248	103.1	+.0117	+ 9.4
1902	367	120.3	- 4	- 1.1	61.62	99.2	-.44	-.7	1321	109.2	+.0044	+ 3.3
1903	363	119.0	.....	.....	61.18	98.5	.....	.....	1365	112.9	.....	.....

MOLDERS, HAND, Male.

[Data from 6 establishments.]

Av. 1890-99.	19	100.0	+2	+10.5	58.90	100.0	+0.10	+0.2	\$0.2089	100.0	+\$0.0202	+ 9.7
1890	19	100.0	+2	+10.5	58.89	100.0	+ .11	+ .2	2106	100.8	+.0185	+ 8.8
1891	19	100.0	+2	+10.5	58.89	100.0	+ .11	+ .2	2106	100.8	+.0185	+ 8.8
1892	19	100.0	+2	+10.5	58.89	100.0	+ .11	+ .2	2106	100.8	+.0185	+ 8.8
1893	19	100.0	+2	+10.5	58.89	100.0	+ .11	+ .2	2119	101.4	+.0172	+ 8.1
1894	19	100.0	+2	+10.5	58.89	100.0	+ .11	+ .2	2106	100.8	+.0185	+ 8.8
1895	17	89.5	+4	+23.5	58.76	99.8	+ .24	+ .4	2103	100.7	+.0188	+ 8.9
1896	20	105.3	+1	+ 5.0	58.95	100.1	+ .03	+ .1	1995	95.5	+.0296	+14.8
1897	20	105.3	+1	+ 5.0	58.95	100.1	+ .03	+ .1	1995	95.5	+.0296	+14.8
1898	20	105.3	+1	+ 5.0	58.95	100.1	+ .03	+ .1	2111	101.1	+.0180	+ 8.5
1899	20	105.3	+1	+ 5.0	58.95	100.1	+ .03	+ .1	2143	102.6	+.0148	+ 6.9
1900	20	105.3	+1	+ 5.0	58.95	100.1	+ .03	+ .1	2143	102.6	+.0148	+ 6.9
1901	21	110.5	.....	.....	59.00	100.2	.....	.....	2154	103.1	+.0137	+ 6.4
1902	21	110.5	.....	.....	59.00	100.2	.....	.....	2267	108.5	+.0024	+ 1.1
1903	21	110.5	.....	.....	59.00	100.2	.....	.....	2291	109.7	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BRICK—Concluded.

OFF BEARERS, Male.

[Data from 19 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	151	100.0	-4	-2.6	57.92	100.0	-0.27	-0.5	\$0.1572	100.0	+\$0.0236	-14.4
1890	153	101.3	-6	-3.9	57.93	100.0	-.28	-.5	.1596	101.5	+.0202	-12.7
1891	147	97.4	-	-	57.77	99.7	-.12	-.2	.1639	104.3	+.0159	-9.7
1892	159	105.3	-12	-7.5	57.90	100.0	-.25	-.4	.1649	104.9	+.0149	-9.0
1893	148	98.0	-1	-.7	57.82	99.8	-.17	-.3	.1678	106.7	+.0120	-7.2
1894	145	96.0	-2	-1.4	57.90	100.0	-.25	-.4	.1589	101.0	+.0210	-13.2
1895	150	99.3	-3	-2.0	57.93	100.0	-.28	-.5	.1545	98.3	+.0253	-16.4
1896	151	100.0	-4	-2.6	57.99	100.1	-.34	-.6	.1505	95.7	+.0293	-19.5
1897	148	98.0	-1	-.7	57.95	100.1	-.30	-.5	.1479	94.1	+.0319	-21.6
1898	149	98.7	-2	-1.3	57.96	100.1	-.31	-.5	.1502	95.5	+.0296	-19.7
1899	155	102.6	-8	-5.2	58.01	100.2	-.39	-.7	.1534	97.6	+.0264	-17.2
1900	143	94.7	+4	+2.8	57.83	99.8	-.18	-.3	.1598	101.6	+.0200	-12.5
1901	146	96.7	+1	+.7	58.00	100.1	-.36	-.6	.1674	106.5	+.0124	-7.4
1902	150	99.3	-3	-2.0	57.81	99.9	-.16	-.3	.1747	111.1	+.0051	-2.9
1903	147	97.4	-	-	57.65	99.5	-	-	.1796	114.4	-	-

BUILDING TRADES.

BRICKLAYERS, Male.

[Data from 212 establishments.]

Av. 1890-99.	4,355	100.0	-709	-16.3	51.57	100.0	-3.74	-7.3	\$0.4387	100.0	+\$0.1084	-24.7
1890	4,422	101.5	-642	-14.5	53.22	103.2	-5.39	-10.1	.4316	98.4	+.1155	-26.8
1891	4,892	112.3	-172	-3.5	52.80	102.4	-4.97	-9.4	.4365	99.5	+.1106	-25.3
1892	4,967	114.1	-97	-2.0	52.19	101.2	-4.36	-8.4	.4431	101.0	+.1040	-23.5
1893	4,335	101.1	-529	-11.7	51.63	100.1	-3.80	-7.4	.4438	101.1	+.1035	-23.3
1894	4,055	93.1	-1,009	-24.9	51.98	100.8	-4.13	-7.9	.4325	98.6	+.1146	-26.5
1895	3,841	88.2	-1,223	-31.8	51.56	100.0	-3.73	-7.2	.4367	99.5	+.1104	-25.3
1896	3,908	91.8	-1,066	-26.7	51.59	99.9	-3.67	-7.1	.4373	99.9	+.1134	-26.1
1897	4,010	92.1	-1,054	-26.3	51.11	99.1	-3.28	-6.4	.4361	99.4	+.1110	-25.5
1898	4,150	95.3	-914	-22.0	50.17	97.9	-2.64	-5.2	.4331	98.7	+.1140	-26.3
1899	4,675	107.3	-389	-8.3	49.21	95.5	-1.41	-2.9	.4597	104.8	+.0874	-19.0
1900	4,576	105.1	-488	-10.7	49.32	95.6	-1.49	-3.0	.4672	106.5	+.0799	-17.1
1901	5,112	118.1	-78	-1.5	48.62	94.3	-.79	-1.6	.4912	112.0	+.0559	-11.4
1902	4,781	109.8	-284	-5.9	48.27	93.6	-.41	-.9	.5318	121.1	+.0158	-3.0
1903	5,064	116.3	-	-	47.8	92.7	-	-	.5171	121.7	-	-

CARPENTERS, Male.

[Data from 227 establishments.]

Av. 1890-99.	5,676	100.0	-925	-16.3	51.85	100.0	-5.44	-9.9	\$0.2751	100.0	-\$0.0843	-30.6
1890	5,923	104.7	-657	-11.1	53.91	102.0	-6.33	-11.7	.2713	98.6	+.0881	-32.5
1891	6,231	110.2	-349	-5.6	53.56	101.3	-6.15	-11.1	.2730	99.2	+.0861	-31.6
1892	6,461	114.3	-119	-1.8	53.12	100.5	-5.71	-10.4	.2825	102.7	+.0769	-27.2
1893	5,528	97.8	-1,052	-19.0	53.27	100.7	-5.81	-10.5	.2744	99.7	+.0850	-31.0
1894	5,049	89.3	-1,531	-30.1	53.27	100.8	-5.86	-10.6	.2693	97.9	+.0901	-33.5
1895	5,021	88.8	-1,559	-31.0	53.61	100.4	-5.64	-10.2	.2692	97.9	+.0902	-33.5
1896	5,413	95.7	-1,167	-21.6	54.07	99.7	-5.26	-9.6	.2740	99.6	+.0854	-31.2
1897	5,416	95.5	-1,177	-21.8	54.26	99.8	-4.79	-8.8	.2748	99.9	+.0846	-30.4
1898	5,402	95.5	-1,178	-21.8	54.02	98.5	-4.61	-8.5	.2739	101.4	+.0801	-28.4
1899	6,150	108.2	-600	-7.5	53.12	97.4	-4.01	-7.9	.2839	103.2	+.0755	-26.6
1900	6,336	112.0	-414	-6.9	51.89	91.5	-2.45	-4.7	.3049	110.8	+.0545	-17.9
1901	6,660	117.8	-80	-1.2	50.74	92.5	-1.33	-2.6	.3190	116.0	+.0404	-12.7
1902	6,906	122.1	-326	-4.7	49.70	90.6	-.29	-.6	.3403	123.7	+.0191	-5.6
1903	6,580	116.4	-	-	49.11	90.1	-	-	.3594	130.6	-	-

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Continued.

CORNICE MAKERS, Male.

[Data from 40 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	517	100.0	+ 89	+17.2	52.44	100.0	-4.37	-8.3	\$0.3015	100.0	+\$0.1037	+34.4
1890	549	106.2	+ 57	+10.4	54.74	104.4	-6.67	-12.2	.2867	95.1	+ .1185	+41.3
1891	545	105.4	+ 61	+11.2	53.11	101.3	-5.04	-9.5	.2928	97.1	+ .1124	+38.4
1892	690	133.5	- 84	-12.2	51.60	98.4	-3.58	-6.8	.2993	99.3	+ .1059	+35.4
1893	516	99.8	+ 90	+17.4	52.75	100.6	-4.68	-8.9	.2982	98.9	+ .1070	+35.9
1894	416	80.5	+190	+45.7	52.61	100.3	-4.54	-8.6	.2944	97.6	+ .1108	+37.6
1895	441	85.3	+165	+37.4	52.47	100.1	-4.40	-8.4	.2974	98.6	+ .1078	+36.2
1896	484	93.6	+122	+25.2	52.16	99.5	-4.09	-7.8	.3060	101.5	+ .0992	+32.4
1897	466	90.1	+140	+30.0	51.92	99.0	-3.85	-7.4	.3082	102.2	+ .0970	+31.5
1898	501	96.9	+105	+21.0	51.69	98.6	-3.62	-7.0	.3107	103.1	+ .0945	+30.4
1899	562	108.7	+ 44	+ 7.8	51.36	97.9	-3.29	-6.4	.3210	106.5	+ .0842	+26.2
1900	535	103.5	+ 71	+13.3	50.42	96.1	-2.35	-4.7	.3424	113.6	+ .0628	+18.3
1901	538	104.1	+ 68	+12.6	49.55	94.5	-1.48	-3.0	.3489	112.4	+ .0563	+16.1
1902	593	114.7	+ 13	+ 2.2	48.49	92.5	-.42	-.9	.3774	125.2	+ .0278	+ 7.4
1903	606	117.2	.....	.....	48.07	91.7	.....	.....	.4052	134.4	.....	.....

GAS FITTERS, Male.

[Data from 64 establishments.]

Av. 1890-99.	162	100.0	+24	+14.8	54.14	100.0	-4.95	-9.1	\$0.3180	100.0	+\$0.0970	+30.5
1890	161	99.4	+25	+15.5	56.03	103.5	-6.84	-12.2	.3037	95.5	+ .1113	+36.6
1891	162	100.0	+24	+14.8	55.53	102.6	-6.34	-11.4	.3062	96.3	+ .1088	+35.5
1892	171	105.6	+15	+ 8.8	54.47	100.6	-5.28	-9.7	.3144	98.9	+ .1006	+32.0
1893	151	93.2	+35	+23.2	54.05	99.8	-4.86	-9.0	.3170	99.7	+ .0980	+30.9
1894	156	96.3	+30	+19.2	53.97	99.7	-4.78	-8.9	.3150	99.1	+ .1000	+31.7
1895	146	90.1	+40	+27.4	53.97	99.7	-4.78	-8.9	.3159	99.3	+ .0991	+31.4
1896	163	100.6	+23	+14.1	53.79	99.4	-4.60	-8.6	.3181	100.0	+ .0969	+30.5
1897	162	100.0	+24	+14.8	53.29	98.4	-4.10	-7.7	.3231	101.6	+ .0919	+28.4
1898	173	106.8	+13	+ 7.5	53.64	99.1	-4.45	-8.3	.3299	103.7	+ .0851	+25.8
1899	179	110.5	+ 7	+ 3.9	52.69	97.3	-3.50	-6.6	.3363	106.8	+ .0787	+23.4
1900	175	108.0	+11	+ 6.3	52.17	96.4	-2.98	-5.7	.3499	110.0	+ .0651	+18.6
1901	177	109.3	+ 9	+ 5.1	51.67	95.4	-2.48	-4.8	.3629	114.1	+ .0521	+14.4
1902	186	114.8	.....	.....	50.11	92.6	-.92	-1.8	.3922	123.3	+ .0228	+ 5.8
1903	186	114.8	.....	.....	49.19	90.9	.....	.....	.4150	130.5	.....	.....

HOD CARRIERS, Male.

[Data from 250 establishments.]

Av. 1890-99.	4,242	100.0	+1,000	+23.6	51.60	100.0	-3.62	-7.0	\$0.2329	100.0	+\$0.0594	+22.9
1890	4,327	102.0	+ 915	+21.1	52.78	102.3	-4.80	-9.1	.2259	97.0	+ .0604	+26.7
1891	4,644	109.5	+ 598	+12.9	52.54	101.8	-4.36	-8.7	.2248	96.5	+ .0615	+27.4
1892	4,894	115.4	+ 348	+ 7.1	51.81	100.4	-3.83	-7.4	.2314	99.4	+ .0549	+23.7
1893	4,455	105.0	+ 787	+17.7	51.64	100.1	-3.66	-7.1	.2325	99.8	+ .0538	+23.1
1894	3,698	87.2	+1,544	+41.8	52.03	100.8	-4.05	-7.8	.2303	99.9	+ .0560	+24.3
1895	3,844	90.6	+1,398	+36.4	51.53	99.9	-3.55	-6.9	.2320	99.6	+ .0543	+23.4
1896	3,959	93.3	+1,283	+32.4	51.45	99.7	-3.47	-6.7	.2335	100.3	+ .0528	+22.6
1897	3,996	94.2	+1,246	+31.2	51.42	99.7	-3.44	-6.7	.2322	99.7	+ .0541	+23.3
1898	3,920	92.4	+1,322	+33.7	51.01	98.9	-3.00	-5.9	.2322	100.6	+ .0520	+22.2
1899	4,685	110.4	+ 657	+11.9	49.79	96.5	-1.81	-3.6	.2518	108.1	+ .0345	+13.7
1900	4,117	104.1	+ 825	+18.7	49.79	96.5	-1.81	-3.6	.2498	107.3	+ .0365	+14.6
1901	5,097	120.2	+ 145	+ 2.8	49.35	95.6	-1.37	-2.8	.2546	109.3	+ .0317	+12.5
1902	5,062	119.3	+ 180	+ 3.6	48.56	94.1	-.98	-1.2	.2676	114.9	+ .0187	+ 7.0
1903	5,242	123.6	.....	.....	47.98	93.0	.....	.....	.2803	122.9	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Continued.

INSIDE WIREMEN, Male.

[Data from 40 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	415	100.0	-349	+ 84.1	54.47	100.0	-5.68	-10.4	\$0.2896	100.0	+\$0.1177	+40
1890	308	74.2	-456	+148.1	55.97	102.8	-7.18	-12.8	.2594	89.6	+.1479	-57
1891	324	78.1	-440	+135.8	55.88	102.6	-7.09	-12.7	.2579	89.1	+.1491	-57
1892	392	94.5	-372	+ 94.9	53.79	98.8	-5.00	-9.3	.2652	91.6	+.1421	-53
1893	378	91.1	-386	+102.1	55.13	101.2	-6.34	-11.5	.2835	97.9	+.1238	+43
1894	389	93.7	-375	+ 96.4	55.29	101.5	-6.50	-11.8	.2782	96.1	+.1291	-46
1895	387	93.3	-377	+ 97.4	55.15	101.2	-6.36	-11.5	.2895	100.0	+.1178	+40
1896	426	102.7	-338	+ 79.3	54.07	99.3	-5.28	-9.8	.3026	104.5	+.1047	-34
1897	541	130.4	-223	+ 41.2	53.10	97.5	-4.31	-8.1	.3117	107.6	+.0956	+20
1898	508	122.4	-256	+ 50.4	52.96	97.2	-4.17	-7.9	.3245	112.1	+.0828	-25
1899	497	119.8	-267	+ 53.7	53.37	98.0	-4.58	-8.6	.3234	111.7	+.0839	-25
1900	609	146.7	-159	+ 25.5	51.58	94.7	-2.79	-5.4	.3495	120.7	+.0578	-16
1901	620	149.4	-144	+ 23.2	51.46	94.5	-2.67	-5.2	.3465	119.6	+.0608	-17
1902	733	176.6	-31	+ 4.2	50.57	92.8	-1.78	-3.5	.3757	129.7	+.0316	+ 8
1903	764	184.1			48.79	89.6			.4073	140.6		

LABORERS, Male.

[Data from 146 establishments.]

Av. 1890-99.	4,460	100.0	+ 622	+13.9	58.84	100.0	-2.71	-4.6	\$0.1467	100.0	+\$0.0209	+14.
1890	5,118	114.8	- 36	- .7	59.02	100.3	-2.89	-4.9	.1507	102.7	+.0169	+11.
1891	4,861	109.0	+ 221	+ 4.5	59.02	100.3	-2.89	-4.9	.1511	103.0	+.0165	+10.
1892	4,812	107.9	+ 270	+ 5.6	59.02	100.3	-2.89	-4.9	.1519	103.5	+.0157	+10.
1893	4,516	101.3	+ 566	+12.5	58.80	99.9	-2.67	-4.5	.1493	101.8	+.0183	-12
1894	4,128	92.6	+ 954	+23.1	58.76	99.9	-2.63	-4.5	.1419	96.7	+.0257	+18
1895	3,796	85.1	+1,286	+33.9	58.88	100.1	-2.75	-4.7	.1410	96.2	+.0236	-16
1896	4,018	90.1	+1,064	+26.5	58.92	100.1	-2.79	-4.7	.1415	96.5	+.0261	+18
1897	4,000	89.7	+1,082	+27.1	58.80	99.9	-2.67	-4.5	.1445	98.5	+.0231	-16
1898	4,521	101.4	+ 558	+12.3	58.44	99.3	-2.31	-4.0	.1466	99.9	+.0210	+14
1899	4,822	108.1	+ 260	+ 5.4	58.71	99.8	-2.58	-4.4	.1457	99.8	+.0219	-15
1900	5,275	118.3	- 193	- 3.7	58.27	99.0	-2.14	-3.7	.1461	99.6	+.0215	-14
1901	4,648	104.2	- 434	- 9.3	57.98	98.5	-1.85	-3.2	.1585	108.0	+.0091	+ 5
1902	5,317	119.2	- 235	- 4.4	56.66	96.3	- .73	- .9	.1644	112.1	+.0032	- 1
1903	5,082	113.9			56.13	95.4			.1676	114.2		

LATHERS, Male.

[Data from 10 establishments.]

AV. 1890-99.	108	100.0	+ 16	+14.8	51.78	100.0	-6.20	-12.0	\$0.3375	100.0	+\$0.0384	+ 11.
1890	92	85.2	- 32	- 31.8	51.58	105.4	-9.00	-16.5	.3174	94.0	+.0585	+18
1891	88	81.5	- 36	- 40.9	51.60	105.4	-9.02	-16.5	.3165	93.8	+.0594	+18
1892	117	108.3	- 7	- 6.0	51.30	104.9	-8.72	-16.1	.3237	95.9	+.0522	+16
1893	99	91.7	+ 25	+ 25.2	51.29	104.8	-8.71	-16.1	.3167	93.8	+.0592	+18
1894	98	90.7	- 26	- 26.5	51.23	104.7	-8.65	-16.0	.3166	93.8	+.0593	+18
1895	119	110.2	- 5	- 4.2	51.70	103.7	-8.12	-15.1	.3304	97.9	+.0455	-13
1896	114	105.6	- 10	- 8.8	48.25	93.2	-2.67	-5.5	.3588	106.3	+.0171	+ 4
1897	107	99.1	-17	-15.9	48.24	93.2	-2.66	-5.5	.3584	106.2	+.0175	+ 4
1898	129	119.4	- 3	- 3.9	47.78	92.3	-2.20	-4.6	.3699	109.5	+.0064	+ 1
1899	118	109.3	+ 6	+ 5.1	47.78	92.3	-2.20	-4.6	.3698	108.7	+.0091	+ 2
1900	131	121.3	- 7	- 5.3	45.18	87.3	+ .40	+ .9	.3738	110.8	+.0021	+ .
1901	131	121.3	- 7	- 5.3	45.60	87.9	+ .08	+ .2	.3753	111.2	+.0006	+ .
1902	146	135.2	- 22	-15.1	45.40	87.7	+ .18	+ .4	.3863	115.1	+.0124	+ 3
1903	124	114.8			45.58	88.0			.3759	111.4		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Continued.

PAINTERS, Male.

[Data from 203 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	3,676	100.0	+345	+ 9.4	53.82	100.0	-4.93	- 9.2	\$0.2763	100.0	+\$0.0687	+24.9
1890	3,541	96.3	+490	+13.6	55.23	102.6	-6.34	-11.5	.2680	97.0	.0770	+28.7
1891	3,708	100.9	+313	+ 8.4	54.86	101.9	-5.97	-10.9	.2712	98.2	.0738	+27.2
1892	3,877	105.5	+144	+ 3.7	54.43	101.1	-5.54	-10.2	.2747	99.4	.0703	+25.6
1893	3,606	99.7	+355	+ 9.7	53.86	100.1	-4.97	- 9.2	.2795	101.2	.0655	+23.4
1894	3,450	93.9	+571	+16.6	54.01	100.4	-5.12	- 9.5	.2737	99.1	.0713	+26.1
1895	3,460	94.1	+561	+16.2	53.87	100.1	-4.98	- 9.2	.2720	98.4	.0730	+26.8
1896	3,648	99.2	+373	+10.2	53.61	99.6	-4.72	- 8.8	.2742	99.2	.0708	+25.8
1897	3,737	101.7	+284	+ 7.6	53.28	99.0	-4.39	- 8.2	.2778	100.6	.0672	+24.2
1898	3,723	101.3	+298	+ 8.0	52.79	98.1	-3.90	- 7.4	.2827	102.3	.0623	+22.0
1899	3,958	107.5	+ 68	+ 1.7	52.27	97.1	-3.38	- 6.5	.2892	104.7	.0558	+19.3
1900	4,089	111.2	- 68	- 1.7	50.91	94.6	-2.02	- 4.0	.3054	110.6	.0396	+13.0
1901	4,284	116.5	-263	- 6.1	49.85	92.6	- .96	- 1.9	.3170	114.7	.0280	+ 8.8
1902	4,254	115.7	-233	- 5.5	49.27	91.5	- .38	- .8	.3303	119.5	.0147	+ 4.5
1903	4,021	109.4			48.89	90.8			.3450	124.9		

PAPER HANGERS, Male.

[Data from 93 establishments.]

Av. 1890-99.	505	100.0	+108	+20.4	55.50	100.0	-5.46	- 9.8	\$0.2874	100.0	-\$0.0739	+25.7
1890	475	94.1	+133	+28.0	56.27	101.4	-6.23	-11.1	.2830	98.5	.0783	+27.7
1891	479	94.9	+129	+26.9	56.00	100.9	-5.96	-10.6	.2853	99.3	.0760	+26.6
1892	508	100.6	+100	+19.7	56.04	101.0	-6.00	-10.7	.2856	99.4	.0757	+26.5
1893	472	93.5	+136	+28.8	55.95	100.8	-5.91	-10.6	.2842	98.9	.0771	+27.1
1894	465	92.1	+143	+30.8	55.72	100.4	-5.68	-10.2	.2827	98.4	.0786	+27.8
1895	472	93.5	+136	+28.8	55.75	100.5	-5.71	-10.2	.2830	98.5	.0783	+27.7
1896	504	99.8	+104	+20.6	55.41	99.8	-5.37	- 9.7	.2861	99.5	.0752	+26.3
1897	534	105.7	+ 74	+13.9	54.94	99.0	-4.90	- 8.9	.2906	101.1	.0707	+24.3
1898	548	108.5	+ 60	+10.9	54.62	98.4	-4.58	- 8.4	.2956	102.9	.0657	+22.2
1899	595	117.8	+ 13	+ 2.2	54.31	97.9	-4.27	- 7.9	.2980	103.7	.0633	+21.2
1900	602	119.2	+ 6	+ 1.0	53.31	96.1	-3.27	- 6.1	.3114	108.4	.0499	+16.0
1901	646	127.9	- 38	- 5.9	51.52	92.8	-1.48	- 2.9	.3259	113.4	.0354	+10.9
1902	627	124.2	- 19	- 3.0	50.72	91.4	- .68	- 1.3	.3415	118.8	.0198	+ 5.8
1903	608	120.4			50.04	93.2			.3613	125.7		

PLASTERERS, Male.

[Data from 146 establishments.]

Av. 1890-99.	1,681	100.0	+214	+12.7	51.83	100.0	-4.79	- 9.2	\$0.3969	100.0	-\$0.1299	+32.7
1890	1,684	100.2	+211	+12.5	53.50	103.2	-6.46	-12.1	.3648	91.9	.1620	+44.4
1891	1,782	106.0	+113	+ 6.3	52.67	101.6	-5.63	-10.7	.3966	99.9	.1302	+32.8
1892	1,857	110.5	+ 38	+ 2.0	52.09	100.5	-5.05	- 9.7	.4100	103.3	.1168	+28.5
1893	1,721	102.4	+174	+10.1	51.97	100.3	-4.93	- 9.5	.4019	101.3	.1249	+31.1
1894	1,547	92.0	+348	+22.5	52.01	100.3	-4.37	- 9.6	.3915	98.6	.1353	+34.6
1895	1,547	92.0	+348	+22.5	51.63	99.6	-4.69	- 8.9	.3924	98.9	.1344	+34.3
1896	1,612	97.7	+253	+15.4	51.50	99.4	-4.46	- 8.7	.3985	100.4	.1283	+32.2
1897	1,587	94.4	+308	+19.9	51.96	100.3	-4.92	- 9.5	.3983	98.3	.1365	+35.0
1898	1,630	97.0	+265	+16.8	51.11	98.6	-4.07	- 8.0	.3974	100.1	.1294	+32.6
1899	1,817	108.1	+ 78	+ 4.3	49.82	96.1	-2.78	- 5.6	.4251	107.2	.1014	+23.8
1900	1,875	111.5	+ 20	+ 1.1	48.75	94.1	-1.71	- 3.5	.4378	110.3	.0890	+20.3
1901	1,769	105.2	+126	+ 7.1	48.27	93.1	-1.23	- 2.5	.4570	115.1	.0698	+15.3
1902	2,061	122.6	-166	- 8.1	47.29	91.2	- .25	- .5	.4946	124.6	.0322	+ 6.6
1903	1,895	112.7			47.04	90.8			.5238	132.7		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Continued.

PLUMBERS, Male.

[Data from 221 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99	1,380	100.0	-215	-15.6	53.23	100.0	-4.26	-8.0	\$0.3550	100.0	\$0.6821	-25.1
1890	1,368	99.1	-227	-16.6	54.33	102.1	-5.36	-9.9	.3464	97.6	.6907	-26.2
1891	1,384	100.3	-211	-15.2	54.09	101.6	-5.12	-9.5	.3488	98.3	.6893	-25.3
1892	1,427	103.4	-168	-11.8	53.86	101.2	-4.88	-9.1	.3511	98.9	.6860	-24.5
1893	1,377	99.8	-218	-15.8	53.36	100.2	-4.39	-8.2	.3532	100.1	.6819	-23.1
1894	1,303	94.4	-292	-22.4	53.28	100.1	-4.31	-8.1	.3516	99.0	.6856	-24.4
1895	1,301	94.3	-294	-22.6	53.08	99.7	-4.11	-7.7	.3546	99.9	.6825	-23.3
1896	1,365	98.9	-230	-16.8	52.86	99.3	-3.89	-7.4	.3505	98.7	.6866	-24.7
1897	1,367	99.1	-228	-16.7	52.67	98.9	-3.70	-7.0	.3598	101.4	.6773	-21.5
1898	1,443	104.6	-152	-10.5	52.53	98.7	-3.56	-6.8	.3638	102.5	.6733	-20.1
1899	1,468	106.2	-129	-8.8	52.28	98.2	-3.31	-6.3	.3684	108.8	.6697	-18.6
1900	1,523	110.4	-72	-4.7	51.40	96.6	-2.49	-4.7	.3811	107.4	.6560	-14.7
1901	1,631	118.3	-38	-2.3	50.77	95.4	-1.80	-3.5	.3935	110.8	.6436	-11.1
1902	1,627	117.9	-32	-2.0	49.52	93.0	-1.56	-1.1	.4122	116.1	.6249	-6.0
1903	1,595	115.6			48.97	92.0			.4371	128.1		

ROOFERS, GRAVEL AND TAR, Male.

[Data from 9 establishments.]

Av. 1890-99	76	100.0	-2	-2.6	57.39	100.0	-0.80	-1.4	\$0.2310	100.0	\$0.0000	-15.1
1890	63	82.9	-11	-14.6	57.62	100.4	-1.08	-1.8	.2242	97.1	.0371	-16.5
1891	68	89.5	-6	-8.5	57.53	100.2	-.94	-1.6	.2334	101.0	.0278	-12.0
1892	70	92.1	-4	-5.7	58.11	101.3	-1.52	-2.6	.2294	108.6	.0219	-9.1
1893	101	133.0	-30	-28.8	56.31	98.1	+.28	+.5	.2485	107.6	.0128	-5.2
1894	58	76.3	-16	-21.6	57.11	100.0	-.82	-1.4	.2283	98.0	.0350	-15.5
1895	69	90.8	-5	-7.2	58.00	101.1	-1.11	-2.4	.2136	92.5	.0477	-22.3
1896	77	101.3	-3	-4.0	57.35	99.9	-.76	-1.3	.2230	96.5	.0383	-17.2
1897	76	100.0	-2	-2.6	57.21	99.7	-.65	-1.1	.2331	100.9	.0282	-12.1
1898	84	110.5	-10	-11.9	57.14	99.6	-.55	-1.0	.2313	100.1	.0300	-13.0
1899	93	122.4	-19	-20.4	57.16	99.6	-.57	-1.0	.2376	102.9	.0237	-10.0
1900	80	105.3	-6	-7.5	55.05	95.9	-1.54	-2.8	.2645	114.5	.0352	-1.2
1901	84	109.2	-9	-10.8	55.23	96.2	-1.36	-2.5	.2677	115.9	.0364	-2.4
1902	72	94.7	-2	-2.8	55.00	95.8	-1.59	-2.9	.2643	114.4	.0330	-1.1
1903	71	97.1			56.59	98.0			.2913	115.1		

ROOFERS, SLATE AND TILE, Male.

[Data from 10 establishments.]

Av. 1890-99	271	100.0	-13	-4.8	53.14	100.0	-4.82	-8.0	\$0.3265	100.0	\$0.0023	-28.3
1890	286	110.2	-41	-13.7	51.85	104.8	-5.23	-9.7	.3294	101.2	.0004	-26.4
1891	282	107.9	-31	-11.6	53.91	100.9	-5.29	-9.8	.3269	99.8	.0029	-29.5
1892	287	105.9	-29	-10.1	53.99	101.0	-5.23	-9.9	.3263	100.9	.0005	-27.2
1893	273	100.7	-15	-5.5	53.73	100.5	-5.11	-9.5	.3276	100.3	.0012	-27.8
1894	245	90.4	-15	-5.3	51.80	100.7	-5.18	-9.6	.3184	97.5	.0105	-31.6
1895	248	91.5	-10	-4.0	51.82	100.7	-5.20	-9.7	.3203	98.1	.0095	-30.4
1896	265	97.8	-7	-2.6	51.58	99.9	-1.76	-8.9	.3213	98.4	.0069	-30.3
1897	272	100.4	-11	-5.1	51.85	98.9	-1.23	-8.0	.3220	98.6	.0068	-30.1
1898	290	107.9	-2	-.8	52.92	99.0	-1.30	-8.1	.3289	101.3	.0079	-26.6
1899	273	100.7	-15	-5.5	52.21	97.7	-3.69	-6.9	.3388	103.8	.0060	-23.6
1900	266	98.2	-8	-3.0	50.89	95.7	-2.27	-4.5	.3566	109.5	.0012	-17.1
1901	259	95.6	-11	-4.1	50.68	94.8	-2.06	-4.1	.3667	112.0	.0031	-14.5
1902	272	100.4	-11	-5.1	48.99	91.7	-.37	-.8	.3869	118.5	.0019	-8.2
1903	248	95.2			48.62	91.0			.4188	128.3		

TABLE E.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Continued.

ROOFERS, TIN, Male.

[Data from 94 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	842	100.0	+ 87	+ 10.3	54.47	100.0	-4.67	- 8.6	\$0.2858	100.0	+\$0.0629	+ 22.2
1890	813	96.6	+116	+ 14.3	55.57	102.0	-5.77	-10.4	.2753	97.0	-.0714	-25.9
1891	863	102.5	+ 66	+ 7.6	55.10	101.2	-3.30	- 9.6	.2813	99.1	-.0634	-23.2
1892	843	100.1	+ 86	+ 10.2	55.05	101.1	-3.25	- 9.5	.2813	99.1	-.0634	-23.2
1893	846	105.2	+ 43	+ 4.9	54.69	100.4	-4.99	- 8.9	.2837	100.0	-.0630	-22.2
1894	799	94.9	+130	+16.3	54.86	100.7	-5.00	- 9.2	.2775	97.8	-.0892	-31.9
1895	789	93.7	+140	+17.7	54.64	100.3	-4.84	- 8.9	.2803	98.8	-.0864	-30.7
1896	850	101.0	+ 79	+ 9.3	54.24	99.6	-4.44	- 8.2	.2841	100.1	-.0626	-22.0
1897	814	96.7	+115	+14.1	53.94	99.0	-4.44	- 7.7	.2850	100.4	-.0617	-21.6
1898	861	102.3	+ 64	+ 7.9	53.53	98.8	-3.73	- 7.0	.2908	102.5	-.0559	-19.2
1899	906	107.6	+ 24	+ 2.5	53.05	97.4	-3.25	- 6.1	.2985	105.2	-.0492	-16.1
1900	886	105.5	+ 41	+ 4.6	52.07	95.6	-2.27	- 4.4	.3086	108.7	-.0381	-12.3
1901	919	109.1	+ 19	+ 1.1	51.08	93.8	-1.28	- 2.5	.3176	111.9	-.0291	- 9.2
1902	968	115.0	+ 39	+ 4.0	49.79	91.4	-.01	-.02	.3398	119.7	-.0089	- 2.0
1903	929	110.3			49.80	91.4			.3467	122.2		

STEAM FITTERS, Male.

[Data from 73 establishments.]

Av. 1890-99.	617	100.0	+179	+29.0	53.87	100.0	-5.96	-11.0	\$0.3343	100.0	+\$0.0813	+27.3
1890	574	93.0	+222	+36.7	55.25	102.6	-7.33	-13.3	.3206	95.9	+.1050	+32.3
1891	561	90.9	+235	+41.9	54.92	101.9	-7.00	-12.7	.3216	96.2	+.1040	+32.3
1892	614	99.5	+182	+29.6	54.55	101.3	-6.63	-12.2	.3322	99.4	+.0834	+26.1
1893	606	107.9	+130	+19.5	54.71	101.6	-6.79	-12.4	.3256	97.4	+.1000	+30.7
1894	596	96.6	+200	+33.6	53.57	99.4	-5.65	-10.5	.3316	99.2	+.0940	+28.3
1895	586	95.3	+208	+35.4	53.75	99.8	-5.86	-10.8	.3282	98.2	+.0974	+29.7
1896	616	99.8	+180	+29.2	53.44	99.2	-5.52	-10.3	.3350	100.5	+.0896	+26.7
1897	653	105.8	+143	+21.9	53.16	98.7	-5.24	- 9.9	.3395	101.5	+.0863	+25.4
1898	628	101.8	+168	+26.8	53.13	98.6	-5.21	- 9.8	.3401	104.3	+.0770	+22.1
1899	659	108.4	+127	+19.0	52.19	96.9	-4.27	- 8.2	.3500	107.4	+.0666	+19.6
1900	679	106.8	+137	+20.8	51.71	96.0	-3.79	- 7.3	.3613	108.1	+.0643	+19.3
1901	711	115.2	+ 85	+12.0	50.66	94.0	-2.74	- 5.4	.3849	115.1	+.0407	+10.6
1902	798	129.3	+ 2	+ .3	49.77	92.4	-1.86	- 3.7	.4018	120.2	+.0238	+ 6.9
1903	796	129.0			47.92	90.0			.4256	127.3		

STONE MASONS, Male.

[Data from 113 establishments.]

Av. 1890-99.	886	100.0	+187	+21.1	55.83	100.0	-4.29	- 8.0	\$0.3617	100.0	+\$0.0869	+24.0
1890	947	106.9	+129	+13.3	54.54	101.3	-5.00	- 9.2	.3722	102.9	+.0764	+20.5
1891	1021	115.2	+ 52	+ 5.1	54.51	101.3	-4.97	- 9.1	.3732	103.2	+.0754	+20.2
1892	984	111.1	+ 89	+ 9.0	54.49	101.2	-4.95	- 9.1	.3673	101.5	+.0813	+22.1
1893	898	101.4	+175	+19.5	51.17	100.6	-4.63	- 8.5	.3644	100.7	+.0842	+23.1
1894	799	90.2	+274	+34.3	54.34	100.9	-4.80	- 8.8	.3440	95.1	+.1046	+30.4
1895	798	90.1	+273	+34.3	54.05	100.4	-4.91	- 8.3	.3495	96.4	+.1001	+28.7
1896	828	93.5	+245	+29.6	53.97	100.3	-4.43	- 8.2	.3547	98.1	+.0939	+26.5
1897	796	89.8	+277	+34.8	53.05	98.6	-3.51	- 6.6	.3628	100.3	+.0858	+23.6
1898	932	105.2	+141	+15.1	52.43	97.4	-2.89	- 5.5	.3581	99.0	+.0935	+25.3
1899	869	97.1	+213	+24.8	52.73	98.0	-3.19	- 6.0	.3719	102.8	+.0767	+20.6
1900	935	105.5	+138	+14.8	51.89	96.4	-2.35	- 4.5	.3788	104.7	+.0628	+18.4
1901	927	104.6	+146	+15.7	51.23	95.2	-1.69	- 3.3	.4007	110.8	+.0179	+12.0
1902	954	107.7	+119	+12.8	50.19	93.2	-1.65	- 3.3	.4304	119.0	+.0182	+ 4.2
1903	1073	121.1			49.54	92.0			.4486	124.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUILDING TRADES—Concluded.

STONE SETTERS, Male.

[Data from 27 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount	Per cent.
Av. 1890-99.	109	100.0	+25	+22.9	61.51	100.0	-2.67	-5.2	\$0.4297	100.0	+\$0.0098	+16.2
1890	96	88.1	+38	+39.6	53.53	103.9	-4.69	-8.8	.3964	92.3	+ .1031	+26.0
1891	96	88.1	+38	+39.6	53.25	103.4	-4.41	-8.3	.3990	92.9	+ .1005	+25.2
1892	108	99.1	+26	+24.1	51.53	100.1	-2.69	-5.2	.4306	100.2	+ .0689	+16.0
1893	111	101.8	+23	+20.7	51.36	99.7	-2.52	-4.9	.4291	99.9	+ .0704	+16.4
1894	109	96.3	+29	+27.6	51.12	99.2	-2.28	-4.5	.4332	100.8	+ .0663	+15.3
1895	118	108.3	+16	+13.6	50.91	98.8	-2.07	-4.1	.4384	102.0	+ .0611	+12.9
1896	116	106.4	+18	+15.5	51.19	99.4	-2.35	-4.6	.4331	100.8	+ .0664	+15.3
1897	107	98.2	+27	+25.2	50.92	98.9	-2.08	-4.1	.4424	103.0	+ .0577	+12.9
1898	108	99.1	+26	+24.1	50.70	98.4	-1.86	-3.7	.4480	104.3	+ .0515	+11.5
1899	122	111.9	+12	+9.8	50.59	98.2	-1.75	-3.5	.4464	103.9	+ .0531	+11.9
1900	134	122.9	—	—	49.60	96.3	— .76	-1.5	.4620	107.5	+ .0375	+8.1
1901	146	133.9	-12	-8.2	49.12	95.4	— .28	— .6	.4859	113.1	+ .0136	+2.8
1902	142	130.3	— 8	-5.6	49.13	95.4	— .29	— .6	.4765	110.9	+ .0230	+4.8
1903	134	122.9	—	—	48.84	91.8	—	—	.4996	116.2	—	—

STRUCTURAL IRON WORKERS, Male.

[Data for employees from 19 establishments for entire period. Data for hours and wages from 19 establishments, 1890-1892; 20 establishments, 1893-1903.]

Av. 1890-99.	561	100.0	+598	+106.6	55.14	100.0	-4.29	-7.8	\$0.2643	100.0	+\$0.1472	+55.7
1890	436	77.7	+723	+165.8	56.73	102.9	-5.88	-10.4	.2475	93.6	+ .1640	+66.3
1891	551	98.2	+608	+110.3	56.15	101.8	-5.30	-9.4	.2591	98.0	+ .1524	+58.5
1892	602	107.3	+557	+92.5	54.77	99.3	-3.92	-7.2	.2658	100.6	+ .1457	+54.8
1893	551	98.8	+605	+109.2	55.18	100.1	-4.33	-7.8	.2666	100.9	+ .1449	+54.4
1894	416	74.2	+743	+178.6	56.20	101.9	-5.35	-9.5	.2470	93.5	+ .1645	+66.6
1895	446	79.5	+713	+159.9	55.22	100.1	-4.37	-7.9	.2581	97.7	+ .1534	+59.4
1896	618	115.5	+511	+78.9	54.32	98.5	-3.47	-6.4	.2576	97.5	+ .1539	+59.7
1897	628	111.9	+531	+84.6	53.47	97.0	-2.62	-4.9	.2751	104.1	+ .1364	+49.6
1898	685	122.1	+474	+69.2	53.90	97.8	-3.05	-5.7	.2734	105.3	+ .1331	+47.8
1899	618	115.5	+511	+78.9	55.44	100.5	-4.59	-8.3	.2676	108.8	+ .1239	+43.1
1900	798	142.2	+361	+45.2	54.03	98.0	-3.18	-5.9	.3183	120.4	+ .0932	+29.3
1901	1,097	195.5	+62	+5.7	53.30	96.7	-2.45	-4.6	.3659	138.4	+ .0456	+12.5
1902	1,280	228.2	-121	-9.5	50.52	91.6	+ .33	+ .7	.4121	155.9	+ .0006	— .1
1903	1,159	206.6	—	—	50.85	92.2	—	—	.4115	155.7	—	—

BUTTER AND CHEESE.

BUTTER MAKERS, Male.

[Data from 21 establishments.]

Av. 1890-99.	97	100.0	-2	-2.1	74.95	100.0	-0.52	-0.7	\$0.1462	100.0	+\$0.0067	+6.0
1890	91	93.8	+8	+8.8	74.96	100.0	— .51	— .7	.1470	100.5	+ .0079	+6.4
1891	92	94.8	+7	+7.6	74.90	99.9	+ .57	+ .8	.1468	100.4	+ .0081	+6.5
1892	95	97.9	+4	+4.2	75.04	100.1	+ .43	+ .6	.1440	98.5	+ .0109	+7.6
1893	95	97.9	+4	+4.2	75.04	100.1	+ .43	+ .6	.1441	98.6	+ .0108	+7.5
1894	97	100.0	+2	+2.1	75.08	100.2	+ .39	+ .5	.1420	97.1	+ .0129	+9.1
1895	99	102.1	—	—	74.82	99.8	— .65	— .9	.1435	98.2	+ .0114	+7.9
1896	100	103.1	-1	-1.0	74.91	99.9	+ .56	+ .7	.1488	101.8	+ .0061	+4.1
1897	101	104.1	-2	-2.0	75.00	100.1	+ .47	+ .6	.1461	100.1	+ .0085	+5.8
1898	99	102.1	—	—	74.82	99.8	— .65	— .9	.1498	102.5	+ .0051	+3.4
1899	100	103.1	-1	-1.0	74.91	99.9	+ .56	+ .7	.1498	102.5	+ .0051	+3.4
1900	100	103.1	-1	-1.0	74.91	99.9	+ .56	+ .7	.1498	102.5	+ .0051	+3.4
1901	99	102.1	—	—	74.82	99.8	— .65	— .9	.1519	103.9	+ .0080	+2.0
1902	106	103.1	-1	-1.0	75.56	100.8	— .09	— .1	.1532	104.8	+ .0017	+1.1
1903	99	102.1	—	—	75.47	100.7	—	—	.1549	106.0	—	—

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

BUTTER AND CHEESE—Concluded.**CHEESE MAKERS, Male.**

[Data from 13 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	34	100.0	+	8.8	63.37	100.0	-0.21	-0.3	\$0.1643	100.0	+\$0.0107	+6.5
1890	32	94.1	+	15.6	69.75	100.5	-59	-8	.1635	99.5	+.0116	+7.0
1891	33	97.1	+	12.1	69.56	100.8	-39	-6	.1619	98.5	+.0131	+8.1
1892	34	100.0	+	8.8	69.35	100.0	-19	-3	.1629	99.1	+.0121	+7.4
1893	34	100.0	+	8.8	69.35	100.0	-19	-3	.1629	99.1	+.0121	+7.4
1894	34	100.0	+	8.8	69.35	100.0	-19	-3	.1629	99.1	+.0121	+7.4
1895	34	100.0	+	8.8	69.35	100.0	-19	-3	.1629	99.1	+.0121	+7.4
1896	34	100.0	+	8.8	69.35	100.0	-19	-3	.1629	99.1	+.0121	+7.4
1897	34	100.0	+	8.8	69.35	100.0	-19	-3	.1637	99.6	+.0113	+6.9
1898	35	102.9	+	5.7	69.17	99.7	-01	-01	.1675	101.9	+.0075	+4.5
1899	35	102.9	+	5.7	69.17	99.7	-01	-01	.1715	104.4	+.0035	+2.0
1900	35	102.9	+	5.7	68.31	98.6	+.85	+1.2	.1761	107.2	-.0011	-.6
1901	37	108.8			69.16	99.7			.1742	106.0	+.0008	+.5
1902	37	108.8			69.16	99.7			.1751	106.6	-.0001	-.1
1903	37	108.8			69.16	99.7			.1750	106.5		

CANDY.**CANDY MAKERS, Male.**

[Data from 7 establishments.]

Av. 1890-99.	61	100.0	-10	-16.4	59.69	100.0	-0.06	-0.1	\$0.2299	100.0	+\$0.0078	+3.4
1890	66	108.2	-15	-22.7	59.67	100.0	-04	-1	.2257	98.2	+.0120	+5.3
1891	64	104.9	-13	-20.3	59.64	99.9	-01	-02	.2256	98.1	+.0122	+5.4
1892	63	103.3	-12	-19.0	59.75	100.1	-12	-2	.2272	98.6	+.0106	+4.6
1893	62	101.6	-11	-17.7	59.73	100.1	-10	-2	.2199	95.7	+.0178	+8.1
1894	58	95.1	-7	-12.1	59.71	100.0	-08	-1	.2211	96.2	+.0166	+7.5
1895	61	100.0	-10	-16.4	59.69	100.0	-06	-1	.2317	100.8	+.0060	+2.6
1896	58	95.1	-7	-12.1	59.69	100.0	-06	-1	.2384	103.7	-.0007	-.3
1897	63	103.3	-12	-19.0	59.71	100.0	-08	-1	.2284	99.3	+.0093	+4.1
1898	55	90.2	-4	-7.3	59.67	100.0	-04	-1	.2404	104.6	-.0027	-1.1
1899	56	91.8	-5	-8.9	59.64	99.9	-01	-02	.2409	104.8	-.0032	-1.3
1900	55	90.2	-4	-7.3	59.64	99.9	-01	-02	.2270	98.7	+.0107	+4.7
1901	48	78.7	+	3	59.58	99.8	+.05	+.1	.2411	104.9	-.0034	-1.4
1902	50	82.0	+	1	59.60	99.8	+.03	+.1	.2378	103.4	-.0001	-.04
1903	51	83.6			59.63	99.9			.2377	103.4		

DIPPERS, Female.

[Data from 5 establishments.]

Av. 1890-99.	161	100.0	+37	+22.6	58.89	100.0	+0.25	+0.4	\$0.0757	100.0	+\$0.0115	+15.2
1890	192	117.1	+	9	58.09	98.6	+1.06	+1.8	.0805	106.3	+.0067	+8.3
1891	185	112.8	+16	+8.6	58.01	98.6	+1.10	+1.9	.0821	108.5	+.0051	+6.2
1892	169	103.0	+	32	58.78	99.8	+.36	+.6	.0763	100.8	+.0109	+14.3
1893	175	106.7	+	26	58.80	99.8	+.34	+.6	.0762	100.7	+.0110	+14.4
1894	158	96.3	+	43	58.77	99.8	+.37	+.6	.0767	101.3	+.0105	+13.7
1895	150	91.5	+	51	59.15	100.5	-04	-1	.0734	97.0	+.0138	+18.8
1896	155	94.5	+	46	59.25	100.6	-11	-2	.0728	96.2	+.0144	+19.8
1897	156	95.1	+	45	59.26	100.6	-12	-2	.0733	96.8	+.0139	+19.0
1898	146	89.0	+	55	59.33	100.7	-19	-3	.0730	96.4	+.0142	+19.5
1899	154	93.9	+	47	59.36	100.8	-22	-4	.0731	96.6	+.0141	+19.3
1900	169	103.0	+	32	59.39	100.8	-25	-4	.0751	99.2	+.0121	+16.1
1901	170	103.7	+	31	59.36	100.8	-22	-4	.0863	114.0	+.0009	+1.0
1902	167	101.8	+	34	59.35	100.8	-21	-4	.0859	113.5	+.0013	+1.5
1903	201	122.6			59.14	100.4			.0872	115.2		

TABLE E.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71A.]

CARPETS.

BURLERS, Female.

[Data from 6 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	97	100.0	+23	+23.7	59.59	100.0	-0.27	-0.5	\$0.1289	100.0	+\$0.0302	+23.4
1890	95	97.9	+25	+26.3	60.00	100.7	-.68	-1.1	1.256	97.4	-.0336	-26.8
1891	93	95.9	+27	+29.0	60.00	100.7	-.68	-1.1	1.286	99.8	-.0306	-23.7
1892	88	90.7	+32	+36.4	60.00	100.7	-.68	-1.1	1.343	104.2	-.0248	-18.5
1893	108	111.3	+12	+11.1	59.15	99.3	+17	+3	1.309	101.6	-.0202	-21.5
1894	73	75.3	+47	+64.4	59.78	100.3	-.46	-.8	1.212	94.0	-.0379	-31.3
1895	100	103.1	+20	+20.0	59.30	99.5	+0.2	+0.3	1.250	97.0	-.0341	-27.3
1896	108	112.4	+11	+10.1	59.28	99.5	+0.1	+1	1.324	102.7	-.0267	-20.2
1897	93	95.9	+27	+29.0	59.55	99.9	-.23	-.4	1.256	97.4	-.0336	-26.8
1898	102	105.2	+18	+17.6	59.41	99.7	-.09	-.2	1.399	108.5	-.0192	-17.7
1899	104	107.2	+16	+15.4	59.16	99.8	-.14	-.2	1.254	97.3	-.0337	-26.9
1900	109	112.4	+11	+10.1	59.41	99.7	-.09	-.2	1.358	105.4	-.0233	-17.2
1901	114	117.5	+6	+5.3	59.40	99.7	-.08	-.1	1.632	111.1	-.0159	-11.1
1902	116	119.6	+4	+3.4	59.43	99.7	-.11	-.2	1.456	112.9	-.0136	-9.3
1903	120	123.7			59.32	99.5			1.591	123.4		

DYERS, Male.

[Data from 6 establishments.]

Av. 1890-99.	186	100.0	+25	+15.6	59.19	100.0	-0.44	-0.7	\$0.1474	100.0	+\$0.0071	+4.8
1890	221	120.4	-9	-4.6	60.00	101.4	-1.25	-2.1	1.451	98.4	+.0094	+6.5
1891	204	109.7	-11	-5.4	60.00	101.4	-1.25	-2.1	1.463	99.3	+.0082	+5.6
1892	176	94.6	+39	+22.2	59.72	100.9	-.97	-1.6	1.393	102.0	+.0042	+2.8
1893	186	100.0	+19	+9.7	58.82	99.4	-.07	-1	1.493	101.3	+.0052	+3.5
1894	168	90.3	+17	+28.0	59.11	99.9	-.30	-6	1.113	96.9	+.0132	+9.3
1895	187	100.5	+28	+15.0	58.83	99.4	-.08	-1	1.113	95.9	+.0132	+9.3
1896	183	98.1	+32	+17.5	58.78	99.3	-.03	-1	1.195	100.7	+.0060	+4.0
1897	165	88.7	+50	+36.3	58.93	99.6	-.18	-3	1.522	103.8	+.0023	+1.5
1898	173	93.0	+42	+24.3	58.85	99.4	-.10	-2	1.196	101.5	+.0049	+3.3
1899	179	96.2	+36	+20.1	58.83	99.4	-.08	-1	1.196	101.5	+.0049	+3.3
1900	181	97.3	+34	+18.8	58.80	99.3	-.05	-1	1.197	100.9	+.0050	+3.9
1901	180	96.8	+35	+19.4	58.82	99.4	-.07	-1	1.487	100.9	+.0050	+3.9
1902	206	110.8	-9	-4.4	58.75	99.3	-.02	+.06	1.477	100.2	+.0068	+4.6
1903	215	115.6			58.75	99.3			1.545	104.8		

LOOM FIXERS, Male.

[Data from 9 establishments.]

Av. 1890-99.	77	100.0	-9	-11.7	59.31	100.0	-0.44	-0.7	\$0.2191	100.0	+\$0.0156	+6.3
1890	70	90.9	-16	-22.3	59.99	101.1	-1.09	-1.8	2.363	101.6	+.0117	+4.6
1891	71	96.1	-12	-16.2	59.97	101.1	-1.07	-1.8	2.413	98.0	+.0207	+8.5
1892	77	100.0	-9	-11.7	59.27	99.9	-.37	-1.6	2.500	100.2	+.0150	+6.0
1893	78	101.3	-8	-10.3	58.97	99.4	-.07	-1	2.512	100.7	+.0130	+5.5
1894	75	97.4	-11	-14.7	59.01	99.4	-.11	-2	2.185	99.6	+.0165	+6.6
1895	78	101.3	-8	-10.3	59.03	99.5	-.13	-2	2.255	98.4	+.0195	+7.9
1896	79	98.7	-10	-13.2	59.03	99.5	-.13	-2	2.153	98.4	+.0197	+8.0
1897	77	100.0	-9	-11.7	59.01	99.4	-.11	-2	2.562	102.7	+.0088	+3.4
1898	82	106.5	-4	-4.9	59.02	99.5	-.12	-2	2.179	99.4	+.0171	+6.9
1899	78	101.3	-8	-10.3	59.13	99.6	-.12	-2	2.511	100.8	+.0136	+5.4
1900	79	102.6	-7	-8.9	59.16	99.7	-.16	-1	2.520	101.0	+.0130	+5.2
1901	81	105.2	-5	-6.2	59.14	99.7	-.21	-1	2.515	100.8	+.0135	+5.4
1902	82	106.5	-4	-4.9	59.10	99.6	-.20	-1	2.555	102.1	+.0093	+3.7
1903	85	111.7			58.90	99.3			2.640	106.3		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARPETS—Continued.

SPOOLERS, Female.

[Data from 6 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela- tive num-ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num-ber.	Rela- tive num-ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num-ber.	Per- cent.			Num-ber.	Per- cent.			Amount.	Per- cent.
Av. 1890-99.	128	100.0	-2	-1.4	59.16	100.0	-0.19	-0.3	\$0.1127	100.0	+\$0.0070	+6.2
1890	144	104.3	-8	-5.6	60.00	101.4	-1.08	-1.7	.1132	100.4	+.0065	+5.7
1891	144	104.3	-8	-5.6	60.00	101.4	-1.08	-1.7	.1078	95.7	+.0119	+11.0
1892	148	107.2	-12	-8.1	59.07	99.8	-1.10	-2	.1105	98.0	+.0092	+8.3
1893	157	113.8	-21	-13.4	58.76	99.3	+.21	+.4	.1144	101.5	+.0053	+4.6
1894	142	102.9	-6	-4.2	58.90	99.6	+.07	+.1	.1168	103.6	+.0029	+2.5
1895	153	110.9	-17	-11.1	58.89	99.5	+.08	+.1	.1119	99.3	+.0078	+7.0
1896	138	100.0	-2	-1.4	58.88	99.5	+.09	+.2	.1130	100.3	+.0067	+5.9
1897	118	85.5	+18	+15.3	59.00	99.7	-.03	-.1	.1140	101.2	+.0057	+5.0
1898	112	81.9	+23	+20.4	59.12	99.9	-.15	-.3	.1125	99.8	+.0072	+6.4
1899	126	91.3	+10	+7.9	59.00	99.7	-.03	-.1	.1133	100.5	+.0064	+5.6
1900	139	100.7	-3	-2.2	58.95	99.6	+.02	+.03	.1122	99.6	+.0075	+6.7
1901	141	102.2	-5	-3.5	58.95	99.6	+.02	+.03	.1140	101.2	+.0057	+5.0
1902	137	99.3	-1	-.7	58.98	99.7	-.01	-.02	.1179	104.6	+.0018	+1.5
1903	136	98.6			58.97	99.7			.1197	106.2		

TWISTERS, Female.

[Data from 3 establishments.]

Av. 1890-99.	62	100.0	+28	+45.2	59.27	100.0	-0.18	-0.3	\$0.0979	100.0	+\$0.0070	+7.2
1890	72	116.1	+18	+25.0	60.60	101.2	-.91	-1.5	.1011	103.3	+.0038	+3.8
1891	68	109.7	+22	+32.4	60.00	101.2	-.91	-1.5	.1022	104.4	+.0027	+2.6
1892	68	109.7	+22	+32.4	60.00	101.2	-.91	-1.5	.1024	104.6	+.0025	+2.4
1893	62	101.6	+27	+42.9	59.02	99.6	+.07	+.1	.1012	103.4	+.0037	+3.7
1894	53	85.5	+37	+59.8	59.02	99.6	+.07	+.1	.0980	89.9	+.0169	+19.2
1895	64	103.2	+36	+40.6	58.72	99.1	+.37	+.6	.0988	91.7	+.0151	+16.8
1896	67	108.1	+23	+34.3	58.90	99.4	+.19	+.3	.0978	99.8	+.0071	+7.3
1897	55	85.5	+37	+59.8	59.06	99.6	+.05	+.1	.0974	99.5	+.0075	+7.7
1898	45	72.6	+45	+100.0	59.11	99.7	-.02	-.03	.0988	102.2	+.0048	+4.8
1899	68	109.7	+22	+32.4	58.88	99.3	+.21	+.4	.0988	100.9	+.0061	+6.2
1900	82	132.3	+8	+9.8	58.95	99.5	+.14	+.2	.1013	103.5	+.0036	+3.6
1901	75	121.0	-15	-20.0	58.80	99.2	+.29	+.5	.1011	103.3	+.0038	+3.8
1902	82	132.3	+8	+9.8	59.00	99.5	+.09	+.2	.1013	103.5	+.0036	+3.6
1903	91	145.2			59.09	99.7			.1049	107.2		

WEAVERS, BRUSSELS AND WILTON, Male.

[Data from 3 establishments.]

Av. 1890-99.	421	100.0	+183	+43.5	59.38	100.0	-0.07	-0.1	\$0.2049	100.0	+\$0.0470	+22.9
1890	411	97.6	+193	+47.0	60.00	101.0	-.69	-1.2	.2044	99.8	+.0475	+23.2
1891	391	92.9	+213	+54.5	60.00	101.0	-.69	-1.2	.1989	97.1	+.0580	+26.6
1892	427	101.4	+177	+41.5	59.17	99.6	+.14	+.2	.2026	98.9	+.0493	+24.8
1893	398	94.8	+205	+51.4	59.37	100.0	-.06	-.1	.1990	97.1	+.0529	+25.6
1894	399	94.8	+205	+51.4	59.15	99.6	+.16	+.3	.1915	93.5	+.0604	+31.5
1895	450	106.9	+154	+34.2	59.21	99.7	+.10	+.2	.2094	102.2	+.0425	+20.3
1896	411	104.8	+163	+37.0	59.22	99.7	+.09	+.2	.2095	102.2	+.0424	+20.2
1897	418	106.4	+156	+34.8	59.21	99.7	+.10	+.2	.2105	102.7	+.0414	+19.7
1898	396	91.1	+208	+52.5	59.20	99.7	+.11	+.2	.2089	102.0	+.0430	+20.6
1899	448	106.4	+156	+34.8	59.24	99.8	+.07	+.1	.2145	104.7	+.0374	+17.4
1900	464	110.2	+140	+30.2	59.44	100.1	-.13	-.2	.2191	106.9	+.0329	+15.0
1901	501	119.0	+103	+20.6	59.30	99.9	+.01	+.02	.2220	108.3	+.0299	+13.5
1902	537	127.6	+67	+12.5	59.32	99.9	-.01	-.02	.2296	116.9	+.0123	+5.1
1903	604	143.5			59.31	99.9			.2519	122.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARPETS—Continued.

WEAVERS, BRUSSELS AND WILTON, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	74	100.0	+ 53	+ 71.6	53.60	100.0	-0.60	-1.0	\$0.1345	100.0	\$0.0228	-17.0
1890	80	108.1	+ 47	+ 58.8	60.00	102.4	-2.00	-3.3	.1327	98.7	.0246	-18.5
1891	74	100.0	+ 53	+ 71.6	63.00	102.4	-2.00	-3.3	.1227	91.2	.0346	-28.2
1892	73	98.6	+ 54	+ 74.0	60.00	102.4	-2.00	-3.3	.1232	91.6	.0341	-27.7
1893	96	129.7	+ 31	+ 32.3	58.00	99.0			.1290	95.9	.0283	-21.9
1894	24	32.4	+103	+429.2	58.00	99.0			.1168	86.8	.0405	-34.7
1895	71	95.9	+ 56	+ 78.9	58.00	99.0			.1243	92.4	.0330	-26.5
1896	82	110.8	+ 45	+ 54.9	58.00	99.0			.1435	106.7	.0138	+ 9.6
1897	51	68.9	+ 76	+149.1	58.00	99.0			.1441	107.1	.0132	+ 9.2
1898	84	113.5	+ 43	+ 51.2	58.00	99.0			.1484	110.3	.0089	- 6.0
1899	105	141.9	+ 22	+ 21.0	58.00	99.0			.1603	119.2	.0030	- 1.9
1900	114	154.1	+ 13	+ 11.4	58.00	99.0			.1512	112.4	.0061	- 4.0
1901	131	177.0	- 4	- 3.1	58.00	99.0			.1892	140.7	.0319	-16.9
1902	131	177.0	- 4	- 3.1	58.00	99.0			.1460	108.6	.0113	- 7.7
1903	127	171.6			58.00	99.0			.1573	117.0		

WEAVERS, INGRAIN, Female.

[Data from 3 establishments.]

Av. 1890-99.	419	100.0	- 3	- 0.7	58.90	100.0	-0.03	-0.1	\$0.1310	100.0	\$0.0097	- 7.4
1890	406	96.9	+10	+ 2.5	59.95	101.8	-1.08	-1.8	.1262	96.8	.0145	+11.5
1891	431	102.9	-15	- 3.5	59.93	101.7	-1.06	-1.8	.1218	93.0	.0189	+13.5
1892	437	104.3	-21	- 4.8	58.56	99.4	+ .31	+ .5	.1241	94.7	.0166	-13.4
1893	388	92.6	+28	+ 7.2	58.56	99.4	+ .31	+ .5	.1290	98.5	.0117	- 9.1
1894	444	106.0	-28	- 6.3	58.51	99.4	+ .33	+ .6	.1315	100.4	.0092	- 7.0
1895	375	89.5	+11	+10.9	58.47	99.3	+ .40	+ .7	.1321	100.8	.0086	- 6.5
1896	399	95.2	+17	+ 4.3	58.68	99.6	+ .19	+ .3	.1331	101.6	.0076	- 5.7
1897	419	100.0	- 3	- .7	58.72	99.7	+ .15	+ .3	.1404	107.2	.0003	- 7.2
1898	435	103.8	-19	- 4.1	58.80	99.8	+ .07	+ .1	.1314	100.3	.0093	- 7.1
1899	453	108.1	-37	- 8.2	58.77	99.8	+ .10	+ .2	.1399	106.8	.0006	- .6
1900	441	105.3	-25	- 5.7	58.86	99.9	+ .01	+ .02	.1354	103.4	.0053	+ 3.9
1901	420	100.2	- 4	- 1.0	58.87	99.9			.1390	106.1	.0017	+ 1.2
1902	431	103.6	-18	- 4.1	58.86	99.9	+ .01	+ .02	.1223	93.4	.0184	-15.0
1903	416	99.3			58.87	99.9			.1407	107.4		

WEAVERS, INGRAIN. (a)

[Data from 4 establishments.]

Av. 1890-99.	435	100.0	- 54	-12.4	60.00	100.0	-1.14	-1.9	\$0.1653	100.0	\$.0187	+11.3
1890	521	119.8	-140	-26.9	60.00	100.0	-1.14	-1.9	.1643	99.4	.0197	-12.0
1891	452	103.9	- 71	-15.7	60.00	100.0	-1.14	-1.9	.1717	103.9	.0123	+ 7.2
1892	465	106.9	- 84	-18.1	60.00	100.0	-1.14	-1.9	.1735	105.0	.0105	- 6.1
1893	438	100.7	- 57	-13.0	60.00	100.0	-1.14	-1.9	.1618	97.9	.0222	+13.7
1894	421	96.8	- 40	- 9.5	60.00	100.0	-1.14	-1.9	.1514	91.6	.0326	-21.5
1895	426	97.9	- 45	-10.6	60.00	100.0	-1.14	-1.9	.1585	95.9	.0255	-16.1
1896	400	92.0	- 19	- 4.8	60.00	100.0	-1.14	-1.9	.1710	103.3	.0099	+ 5.7
1897	422	97.0	- 11	- 9.7	60.00	100.0	-1.14	-1.9	.1621	98.1	.0219	+13.5
1898	407	93.6	- 16	- 6.4	60.00	100.0	-1.14	-1.9	.1711	103.5	.0129	+ 7.5
1899	397	91.3	- 26	- 4.0	60.00	100.0	-1.14	-1.9	.1648	99.7	.0192	+11.7
1900	378	86.9	- 33	- 8.0	60.00	100.0	-1.14	-1.9	.1688	100.9	.0172	-10.3
1901	414	95.2	- 23	- 8.0	60.00	100.0	-1.14	-1.9	.1740	105.3	.0100	- 5.7
1902	404	92.9	-23	- 5.7	60.00	100.0	-1.14	-1.9	.1780	107.7	.0080	+ 3.4
1903	381	87.6			58.86	98.1			.1840	111.3		

a Sex not reported.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARPETS—Concluded.

WINDERS, Female.

[Data from 6 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	236	100.0	+67	+28.4	59.15	100.0	-0.66	-1.1	\$0.1106	100.0	+\$0.0072	+6.5
1890	212	89.8	+91	+42.9	60.00	101.4	-1.51	-2.5	.1112	100.5	+ .0066	+5.9
1891	211	89.4	+92	+43.6	60.00	101.4	-1.51	-2.5	.1072	96.9	+ .0106	+9.9
1892	219	92.8	+84	+38.4	59.10	99.9	-.61	-1.0	.1110	100.4	+ .0068	+6.1
1893	216	104.2	+57	+25.2	58.82	99.4	-.33	-.6	.1102	99.6	+ .0076	+6.9
1894	209	88.6	+94	+45.0	58.93	99.6	-.44	-.7	.1083	97.9	+ .0095	+8.8
1895	257	108.9	+46	+17.9	58.91	99.6	-.42	-.7	.1083	97.9	+ .0095	+8.8
1896	250	105.9	+53	+21.2	58.89	99.6	-.40	-.7	.1119	101.2	+ .0059	+5.3
1897	244	103.4	+59	+24.2	58.95	99.7	-.46	-.8	.1088	98.4	+ .0090	+8.3
1898	247	104.7	+56	+22.7	58.94	99.6	-.45	-.8	.1130	102.2	+ .0048	+4.2
1899	262	111.0	+41	+15.6	58.93	99.6	-.44	-.7	.1162	105.1	+ .0016	+1.4
1900	268	113.6	+35	+13.1	58.96	99.7	-.47	-.8	.1183	107.0	+ .0005	-.4
1901	278	117.8	+25	+9.0	58.88	99.5	-.39	-.7	.1147	103.7	+ .0031	+2.7
1902	294	124.6	+9	+3.1	58.89	99.6	-.40	-.7	.1152	104.2	+ .0026	+2.3
1903	303	128.4			58.49	98.9			.1178	106.5		

CARRIAGES AND WAGONS.

BLACKSMITHS, Male.

[Data from 98 establishments.]

Av. 1890-99.	583	100.0	+70	+12.0	58.75	100.0	-0.97	-1.7	\$0.2800	100.0	+\$0.0149	+6.5
1890	690	101.2	+63	+10.7	59.17	100.7	-1.39	-2.3	.2356	102.4	+ .0083	+3.9
1891	590	101.2	+63	+10.7	59.20	100.8	-1.42	-2.4	.2342	101.8	+ .0107	+4.6
1892	610	104.6	+43	+7.0	59.14	100.7	-1.36	-2.3	.2343	101.9	+ .0106	+4.5
1893	673	115.4	-20	-3.0	59.08	100.6	-1.30	-2.2	.2169	94.3	+ .0290	+12.9
1894	579	99.3	+74	+12.8	58.00	98.7	-.22	-.4	.2222	96.6	+ .0227	+10.2
1895	608	104.3	+45	+7.4	58.42	99.4	-.64	-1.1	.2186	95.0	+ .0287	+12.0
1896	497	85.2	+156	+31.4	58.38	99.4	-.60	-1.0	.2340	101.7	+ .0109	+4.7
1897	511	88.2	+139	+27.0	58.75	100.0	-.97	-1.7	.2321	100.9	+ .0093	+3.9
1898	583	100.3	+68	+11.6	58.87	100.2	-1.09	-1.9	.2321	100.9	+ .0128	+5.5
1899	587	100.7	+66	+11.2	58.82	99.6	-.74	-1.3	.2366	102.9	+ .0083	+3.6
1900	600	102.9	+53	+8.8	58.48	99.5	-.70	-1.2	.2342	101.8	+ .0107	+4.6
1901	648	111.1	+5	+1.8	58.60	99.7	-.82	-1.4	.2356	102.4	+ .0093	+3.9
1902	627	107.5	+26	+4.1	58.27	99.2	-.49	-.8	.2410	104.8	+ .0039	+1.6
1903	653	112.0			57.78	98.3			.2449	106.5		

BODY MAKERS, CARRIAGE, Male.

[Data from 26 establishments.]

Av. 1890-99.	195	100.0	+76	+39.0	59.10	100.0	-0.79	-1.3	\$0.2395	100.0	+\$0.0106	+4.4
1890	168	86.2	+103	+61.3	59.31	100.4	-1.00	-1.7	.2398	100.1	+ .0103	+4.3
1891	187	95.9	+84	+44.9	59.36	100.4	-1.05	-1.8	.2388	99.7	+ .0113	+4.7
1892	187	95.9	+84	+44.9	59.29	100.3	-.98	-1.7	.2424	101.2	+ .0077	+3.2
1893	190	97.4	+81	+42.6	59.15	100.1	-.84	-1.4	.2399	100.2	+ .0102	+4.3
1894	228	116.9	+43	+18.9	59.31	100.4	-1.00	-1.7	.2362	98.6	+ .0139	+5.9
1895	183	93.8	+88	+48.1	59.19	100.2	-.88	-1.5	.2344	97.9	+ .0157	+6.7
1896	178	91.3	+93	+52.2	59.09	100.0	-.78	-1.3	.2361	98.6	+ .0140	+5.9
1897	197	101.0	+74	+37.6	59.00	99.8	-.69	-1.2	.2361	98.6	+ .0140	+5.9
1898	196	100.5	+75	+38.3	58.98	99.8	-.67	-1.1	.2421	101.1	+ .0080	+3.3
1899	231	118.5	+40	+17.3	58.29	98.6	+ .02	+ .03	.2487	103.8	+ .0014	+ .6
1900	227	116.4	+44	+19.4	58.81	99.5	-.50	-.9	.2407	100.5	+ .0094	+3.9
1901	269	137.9	+2	+ .7	58.94	99.7	-.63	-1.1	.2357	98.4	+ .0144	+6.1
1902	271	139.0			58.90	99.7	-.59	-1.0	.2458	102.6	+ .0043	+1.7
1903	271	139.0			58.31	98.7			.2501	104.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARS, STEAM RAILROAD.

BLACKSMITHS, Male.

[Data for employees from 44 establishments for entire period. Data for hours and wages from 44 establishments, 1890-1898; 45 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	989	100.0	+371	+37.5	57.57	100.0	-0.06	-0.1	\$0.2669	100.0	+\$0.0117	+4.4
1890	1,103	111.5	+257	+23.3	58.69	101.9	-1.18	-2.0	2730	102.3	+.0066	+2.1
1891	1,035	104.7	+325	+31.4	58.05	100.8	-.54	-.9	2697	101.0	+.0089	+3.3
1892	1,067	107.9	+293	+27.5	58.44	101.5	-.93	-1.6	2711	101.6	+.0075	+2.4
1893	1,056	106.8	+304	+28.8	58.22	101.1	-.71	-1.2	2716	101.8	+.0070	+2.6
1894	812	82.1	+548	+67.5	55.60	96.6	+1.91	+3.4	2699	101.1	+.0087	+3.2
1895	805	81.4	+555	+68.9	56.45	98.1	+1.06	+1.9	2727	102.2	+.0069	+2.5
1896	995	100.6	+365	+36.7	56.90	98.8	+.61	+1.1	2565	96.1	+.0221	+6.6
1897	903	91.3	+457	+50.6	56.50	98.1	+1.01	+1.8	2652	99.4	+.0134	+5.1
1898	1,034	104.6	+326	+31.5	58.19	101.1	-.68	-1.2	2589	97.0	+.0197	+7.6
1899	1,084	109.6	+276	+25.5	58.63	101.8	-1.12	-1.9	2603	97.5	+.0183	+7.0
1900	1,200	121.3	+160	+13.3	58.68	101.9	-1.17	-2.0	2614	97.9	+.0172	+6.6
1901	1,220	123.4	+140	+11.6	58.07	100.9	-.56	-1.0	2648	99.2	+.0138	+5.2
1902	1,282	129.6	+78	+6.1	58.00	100.7	-.49	-.8	2679	100.4	+.0107	+4.0
1903	1,360	137.5			57.51	99.9			2786	104.4		

BOILER MAKERS, Male.

[Data from 34 establishments.]

Av. 1890-99.	562	100.0	+382	+68.0	57.20	100.0	-0.85	-1.5	\$0.2673	100.0	+\$0.0357	+13.4
1890	514	91.5	+430	+83.7	59.31	103.7	-2.99	-5.0	2685	100.4	+.0345	+12.5
1891	518	92.2	+426	+82.2	57.69	100.9	-1.34	-2.3	2721	101.8	+.0309	+11.4
1892	667	100.9	+377	+66.5	59.10	103.3	-2.75	-4.7	2695	100.8	+.0335	+12.4
1893	571	101.6	+373	+65.3	58.68	102.6	-2.33	-4.0	2709	101.3	+.0321	+11.4
1894	528	94.0	+416	+78.8	54.23	94.8	+2.12	+3.9	2650	99.1	+.0380	+14.3
1895	532	94.7	+412	+77.4	55.59	97.2	+.76	+1.4	2637	98.7	+.0393	+14.9
1896	563	100.2	+381	+67.7	55.62	97.2	+.73	+1.3	2648	99.1	+.0382	+14.4
1897	579	103.0	+365	+65.0	55.71	97.4	+.61	+1.1	2639	98.7	+.0391	+14.4
1898	611	108.7	+333	+59.5	58.04	101.5	-1.69	-2.9	2658	99.4	+.0372	+14.0
1899	640	113.9	+304	+54.5	57.98	101.4	-1.63	-2.8	2687	100.5	+.0343	+12.8
1900	665	118.3	+270	+42.0	58.22	101.8	-1.87	-3.2	2723	101.9	+.0307	+11.3
1901	758	134.9	+186	+24.6	57.31	100.2	-.99	-1.7	2745	102.7	+.0285	+10.4
1902	785	139.7	+160	+20.3	57.09	99.8	-.74	-1.3	2820	105.5	+.0210	+7.4
1903	944	168.0			56.35	98.5			3030	113.4		

BRASS FINISHERS, Male.

[Data from 7 establishments.]

Av. 1890-99.	72	100.0	+73	+101.4	59.55	100.0	-3.60	-6.0	\$0.2627	100.0	+\$0.0542	+20.6
1890	63	87.5	+82	+130.2	59.67	100.2	-3.72	-6.2	2760	105.8	+.0389	+14.0
1891	61	84.7	+84	+137.7	59.08	99.2	-3.13	-5.3	2761	105.1	+.0406	+14.9
1892	68	94.4	+77	+113.2	59.72	100.3	-3.77	-6.3	2738	104.2	+.0431	+15.7
1893	77	106.9	+68	+88.3	59.78	100.4	-3.83	-6.4	2811	107.0	+.0358	+12.7
1894	60	83.3	+85	+141.7	59.42	99.8	-3.47	-5.8	2809	87.9	+.0860	+37.2
1895	63	87.5	+82	+130.2	59.32	99.6	-3.37	-5.7	2463	93.8	+.0706	+28.7
1896	90	125.0	+55	+61.1	59.43	99.8	-3.48	-5.9	2588	98.5	+.0581	+22.4
1897	71	98.6	+74	+104.2	59.31	99.6	-3.36	-5.7	2603	99.1	+.0566	+21.7
1898	100	138.9	+45	+65.0	59.87	100.5	-3.92	-6.5	2581	98.2	+.0588	+22.6
1899	66	91.7	+79	+119.7	59.85	100.5	-3.90	-6.5	2635	100.3	+.0534	+20.3
1900	74	102.8	+71	+95.9	59.82	100.5	-3.87	-6.5	2772	105.5	+.0397	+14.3
1901	73	101.4	+72	+98.6	59.75	100.3	-3.80	-6.4	2654	101.0	+.0518	+19.4
1902	79	109.7	+66	+83.5	59.78	100.4	-3.83	-6.4	2642	112.0	+.0227	+7.7
1903	145	201.4			55.95	94.0			3109	120.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARS, STEAM RAILROAD—Continued.

CABINETMAKERS, Male.

[Data from 15 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	727	100.0	22	+ 3.0	59.63	100.0	3.94	-6.6	\$0.2354	100.0	\$0.0715	+30.4
1890.	713	98.1	36	+ 5.0	59.71	100.1	4.02	-6.7	.2533	107.6	.0536	+21.2
1891.	708	96.7	46	+ 6.5	59.54	99.8	3.85	-6.5	.2526	107.3	.0543	+21.5
1892.	538	74.0	211	+39.2	59.57	99.9	3.88	-6.5	.2408	102.3	.0661	+27.5
1893.	642	88.3	107	+16.7	59.82	100.3	4.18	-6.9	.2481	105.4	.0588	+23.7
1894.	614	84.5	135	+22.0	59.55	99.9	3.86	-6.6	.2036	86.5	.1033	+50.7
1895.	782	107.6	33	-4.2	59.70	100.1	4.01	-6.7	.2160	91.8	.0909	+42.1
1896.	699	96.1	50	+7.2	59.64	100.0	3.95	-6.6	.2304	97.9	.0765	+35.2
1897.	818	116.6	99	+11.7	59.55	99.9	3.86	-6.5	.2288	97.2	.0781	+34.1
1898.	727	100.0	22	+ 3.0	59.57	99.9	3.88	-6.5	.2338	99.3	.0731	+31.3
1899.	1,001	137.7	252	+25.2	59.61	100.0	3.92	-6.6	.2464	104.7	.0605	+24.6
1900.	906	124.6	157	+17.3	59.72	100.2	4.03	-6.7	.2516	106.9	.0553	+22.0
1901.	917	126.1	168	+18.3	59.80	99.4	3.61	-6.1	.2652	112.7	.0417	+15.7
1902.	975	134.1	226	+23.2	59.41	99.6	3.72	-6.3	.2884	122.5	.0185	+ 6.4
1903.	749	103.0			55.69	93.4			.3069	130.4		

CARPENTERS, Male.

[Data for employees from 40 establishments for entire period. Data for hours and wages from 40 establishments, 1890-1899; 41 establishments, 1899-1903.]

Av. 1890-99.	4,094	100.0	1,379	+33.7	57.53	100.0	0.60	-1.0	\$0.2185	100.0	\$0.0213	- 9.7
1890.	4,129	100.9	1,344	+32.6	58.21	101.2	1.31	-2.2	.2219	101.6	.0179	+ 8.1
1891.	4,157	101.5	1,316	+31.7	57.78	100.4	.85	-1.5	.2216	101.4	.0182	+ 8.2
1892.	4,320	105.5	1,153	+26.7	58.29	101.3	1.36	-2.3	.2249	102.9	.0149	+ 6.6
1893.	4,285	104.7	1,188	+27.7	57.79	100.5	.86	-1.5	.2226	104.6	.0112	+ 4.9
1894.	3,635	90.3	1,778	+48.1	56.33	97.9	.60	+1.1	.2117	96.9	.0281	+13.3
1895.	3,667	89.6	1,806	+49.3	56.97	99.0	.01	-1.1	.2149	98.4	.0249	+11.6
1896.	3,903	95.3	1,570	+40.2	56.88	98.9	.05	+1.1	.2130	97.5	.0268	+12.6
1897.	3,925	95.9	1,548	+39.4	56.75	98.6	.18	+1.3	.2146	98.2	.0252	+11.7
1898.	4,307	105.2	1,166	+27.1	58.20	101.2	1.27	-2.2	.2158	97.8	.0260	+12.2
1899.	4,556	111.3	917	+20.1	58.11	101.0	1.18	-2.0	.2202	100.8	.0196	+ 8.9
1900.	4,964	121.3	509	+10.3	58.27	101.3	1.34	-2.3	.2199	100.6	.0199	+ 9.0
1901.	5,003	122.2	470	+ 9.4	57.87	100.6	.94	-1.6	.2236	102.3	.0162	- 7.2
1902.	5,390	131.8	77	+ 1.4	57.92	100.7	.59	-1.7	.2314	105.9	.0084	- 3.6
1903.	5,473	133.7			56.93	99.0			.2388	109.7		

COPPERSMITHS, Male

[Data from 14 establishments.]

Av. 1890-99.	33	100.0	15	-45.5	55.41	100.0	1.26	-2.3	\$0.2817	100.0	\$0.0070	+2.5
1890.	30	90.9	18	-60.0	58.50	105.6	1.83	-3.1	.2856	101.4	.0031	+1.1
1891.	29	84.8	20	-71.4	57.68	104.1	1.01	-1.8	.2855	101.3	.0032	+1.1
1892.	29	87.9	19	-65.5	57.45	103.7	.78	-1.4	.2844	100.6	.0033	+1.9
1893.	29	87.9	19	-65.5	56.34	101.7	.33	-1.6	.2800	102.9	.0013	- 4.4
1894.	31	93.9	17	-51.8	51.77	93.4	4.90	+9.5	.2812	99.8	.0075	+2.7
1895.	29	84.8	20	-71.4	53.50	96.6	3.17	+5.9	.2857	101.4	.0030	+1.1
1896.	31	103.0	14	-41.2	52.94	95.5	3.73	-7.0	.2795	99.2	.0092	+3.3
1897.	32	115.2	10	-26.3	53.00	95.7	3.67	-6.9	.2744	97.4	.0143	+5.2
1898.	41	124.2	7	+17.1	56.56	102.1	.11	+2.2	.2710	96.2	.0177	+6.5
1899.	41	124.2	7	+17.1	56.57	101.7	.30	+2.5	.2803	99.5	.0064	+3.0
1900.	44	133.3	4	+ 9.1	57.07	103.0	.40	+1.7	.2801	99.4	.0086	+3.1
1901.	45	136.4	3	+ 6.7	56.27	101.6	.40	+1.7	.2789	99.0	.0088	+3.5
1902.	54	163.6	6	-11.1	56.96	102.8	.29	-1.5	.2827	100.4	.0060	+2.1
1903.	48	145.5			56.67	102.3			.2887	102.5		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARS, STEAM RAILROAD—Continued.

LABORERS, Male.

[Data from 11 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	751	100.0	-307	-40.9	58.17	100.0	-1.42	-2.4	\$0.1304	100.0	-\$0.0298	-22.8
1890.	793	105.6	-265	-33.4	54.85	101.2	+1.74	+1.3	1.300	99.7	+0.02	+1.5
1891.	834	111.1	-221	-29.9	58.90	101.3	+1.65	+1.1	1.294	99.2	+0.058	+4.5
1892.	805	107.2	-253	-31.4	58.77	101.0	+1.82	+1.4	1.315	100.7	+0.019	+1.5
1893.	790	105.2	-268	-33.9	58.35	100.3	+1.26	+2.2	1.164	112.3	+0.102	+7.8
1894.	527	70.2	-531	-100.8	56.69	97.5	+2.90	+5.1	1.303	99.9	+0.059	+4.5
1895.	619	81.2	-418	-73.1	58.01	99.8	+1.55	+2.7	1.238	97.2	+0.091	+7.0
1896.	779	103.7	-279	-37.8	57.93	99.6	-1.66	-2.9	1.279	98.1	+0.083	+6.3
1897.	620	82.6	-438	-70.6	57.63	99.1	-1.96	-3.4	1.284	98.5	+0.078	+6.0
1898.	823	109.6	-275	-28.6	58.31	100.2	+1.28	+2.2	1.268	97.2	+0.094	+7.2
1899.	930	123.8	-128	-13.8	58.16	100.0	+1.43	+2.5	1.271	97.5	+0.091	+7.0
1900.	1,119	149.0	-61	-5.5	58.28	100.2	+1.31	+2.5	1.311	100.5	+0.051	+3.9
1901.	1,095	145.8	-37	-3.4	58.51	100.6	+1.05	+1.8	1.308	100.3	+0.054	+4.1
1902.	945	126.5	-143	-16.9	58.37	100.2	+1.22	+2.1	1.344	103.1	+0.018	+1.3
1903.	1,058	140.9			59.59	102.4			1.362	104.4		

MACHINE WOODWORKERS, Male.

[Data for employees from 21 establishments for entire period. Data for hours and wages from 21 establishments, 1890-1898; 22 establishments, 1899-1903.]

Av. 1890-99.	389	100.0	+151	+39.6	58.81	100.0	-2.29	-3.9	\$0.2159	100.0	-\$0.0298	-13.7
1890.	436	112.1	107	+27.5	51.53	100.8	-2.79	-4.7	.2222	102.9	-0.0233	-10.8
1891.	461	119.3	79	+17.0	50.22	100.7	-2.68	-4.5	.2288	106.0	-0.0167	-7.7
1892.	521	135.0	18	+3.4	50.52	101.2	-2.98	-5.0	.2167	100.1	-0.0288	-13.3
1893.	557	143.2	11	+2.5	50.51	101.2	-2.97	-5.0	.2213	102.5	-0.0242	-11.2
1894.	288	74.0	-255	-58.5	58.19	98.9	-1.65	-2.8	.2101	97.3	+0.050	+2.3
1895.	389	100.0	-201	-51.9	58.39	99.3	-1.85	-3.2	.2081	96.4	+0.074	+3.4
1896.	508	130.2	-233	-57.3	58.42	99.5	-1.88	-3.2	.2140	99.1	+0.015	+0.7
1897.	240	71.6	-293	-57.2	58.11	98.8	-1.60	-2.8	.2049	95.4	+0.089	+4.1
1898.	316	88.7	-198	-51.1	58.72	99.8	-2.18	-3.7	.2140	99.1	+0.011	+0.5
1899.	387	99.5	-146	-37.5	58.88	100.1	-2.31	-4.0	.2178	100.9	-0.0277	-12.8
1900.	428	110.0	-113	-26.9	59.21	100.6	-2.67	-4.5	.2195	101.7	-0.0266	-12.5
1901.	446	114.8	-77	-17.2	59.60	101.6	-2.06	-3.5	.2177	100.8	-0.0278	-12.8
1902.	497	127.8	-46	-9.3	58.68	99.7	-2.11	-3.6	.2188	100.0	-0.0167	-7.7
1903.	541	139.6			59.4	99.1			.2155	113.7		

MACHINISTS, Male.

[Data for employees from 14 establishments for entire period. Data for hours and wages from 14 establishments, 1890-1898; 15 establishments, 1899-1903.]

Av. 1890-99.	3,264	100.0	1,789	+54.7	57.1	100.0	-0.42	-0.7	\$0.2623	100.0	-\$0.0281	-10.7
1890.	3,604	110.8	1,476	+41.1	57.7	101.2	-1.37	-2.7	.2636	100.5	-0.0268	-10.2
1891.	3,614	111.1	1,476	+41.1	57.7	101.2	-1.37	-2.7	.2625	100.1	-0.0279	-10.6
1892.	3,189	97.9	1,477	+41.2	57.4	101.1	-1.49	-2.9	.2630	100.3	-0.0274	-10.4
1893.	3,294	101.0	1,657	+47.7	57.9	101.5	-1.18	-2.0	.2643	100.8	-0.0261	-9.9
1894.	2,269	69.9	-1,027	-31.2	54.8	96.2	-1.96	-3.0	.2641	100.7	-0.0262	-10.0
1895.	3,008	92.0	-1,256	-38.5	56.5	99.1	-0.96	-1.6	.2630	99.9	-0.0281	-10.8
1896.	3,266	100.0	-1,040	-32.1	57.1	99.7	-1.37	-2.7	.2609	99.5	-0.0295	-11.3
1897.	3,171	97.2	-1,093	-33.5	56.8	99.4	-1.47	-2.8	.2607	99.4	-0.0297	-11.4
1898.	3,472	106.4	-800	-23.2	57.34	100.6	-0.99	-1.9	.2643	100.9	-0.0311	-12.0
1899.	3,709	113.7	-779	-23.6	57.74	100.6	-0.99	-1.9	.2643	100.9	-0.0311	-12.0
1900.	3,791	116.5	-787	-23.8	58.1	101.7	-1.37	-2.7	.2639	100.6	-0.0285	-10.9
1901.	3,787	116.3	-791	-23.9	57.96	101.4	-1.29	-2.4	.2677	102.1	-0.0227	-8.6
1902.	3,958	121.3	-1,093	-27.6	57.94	101.3	-1.19	-2.1	.2749	104.8	-0.0135	-5.1
1903.	4,281	131.2			59.7	103.1			.2904	110.7		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARS, STEAM RAILROAD—Continued.

MOLDERS, BRASS, Male.

[Data from 11 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	68	100.0	+40	+58.8	58.82	100.0	-2.63	-4.5	\$0.2722	100.0	+\$0.0177	+17.5
1890	66	97.1	+42	+63.6	58.42	101.0	-3.23	-5.4	.2877	105.6	+.0222	+11.2
1891	70	102.9	+38	+54.3	59.67	101.4	-2.48	-5.8	.2909	106.9	+.0290	+10.9
1892	73	107.4	+35	+47.9	59.63	101.4	-3.44	-5.8	.2693	98.9	+.0506	+18.8
1893	70	102.9	+38	+54.3	59.44	101.1	-3.25	-5.5	.2750	101.0	+.0449	+16.3
1894	54	79.4	+54	+100.0	55.56	94.5	+1.63	-1.1	.2843	104.4	+.0356	+12.5
1895	56	82.4	+52	+92.9	59.52	101.2	-3.33	-5.6	.2554	93.8	+.0645	+25.3
1896	59	86.8	+49	+83.1	59.37	100.9	-3.18	-5.4	.2564	94.2	+.0635	+24.8
1897	68	100.0	+40	+58.8	56.62	96.3	-1.43	-8	.2625	95.4	+.0574	+21.9
1898	78	114.7	+30	+38.5	59.49	101.1	-3.30	-5.5	.2639	97.0	+.0560	+21.2
1899	81	119.1	+27	+33.3	59.52	101.2	-3.33	-5.6	.2766	101.6	+.0433	+15.7
1900	90	132.4	+18	+20.0	59.69	101.5	-3.50	-5.9	.2714	99.7	+.0485	+17.9
1901	100	147.1	+8	+8.0	59.76	101.5	-3.57	-6.0	.2780	102.1	+.0419	+15.1
1902	106	155.9	+2	+1.9	59.86	101.8	-3.67	-6.1	.2773	102.2	+.0226	+7.6
1903	108	158.8			56.19	95.5			.3199	117.5		

MOLDERS, IRON, Male.

[Data for employees from 13 establishments for entire period. Data for hours and wages from 13 establishments, 1890-1899; 14 establishments, 1899-1903.]

Av. 1890-99.	571	100.0	+128	+22.4	58.29	100.0	-0.40	-0.7	\$0.2572	100.0	+\$0.0155	+6.0
1890	615	113.0	+54	+8.4	58.53	100.4	-1.66	-1.1	.2704	105.1	+.0023	+.9
1891	607	106.3	+52	+15.2	58.73	100.8	-1.84	-1.4	.2666	103.7	+.0061	+2.3
1892	637	111.6	+62	+9.7	58.75	100.8	-1.86	-1.5	.2687	104.5	+.0040	+1.5
1893	538	97.7	+111	+25.3	58.69	100.7	-1.90	-1.4	.2791	108.5	+.0064	+2.3
1894	491	86.0	+208	+42.4	56.19	96.4	-1.70	-3.0	.2551	99.2	+.0176	+6.9
1895	473	83.2	+224	+47.2	58.67	100.7	-1.78	-1.3	.2548	99.1	+.0179	+7.0
1896	580	101.6	+119	+20.5	58.97	101.2	-1.06	-1.8	.2382	92.6	+.0345	+14.5
1897	487	85.3	+212	+43.5	56.51	96.9	-1.38	-2.4	.2173	96.2	+.0254	+10.3
1898	571	100.0	+128	+22.4	58.88	101.0	-1.96	-1.7	.2157	95.5	+.0270	+11.0
1899	658	115.2	+41	+6.2	58.92	101.1	-1.08	-1.7	.2462	98.7	+.0285	+10.8
1900	712	124.7	-13	-1.8	58.92	101.1	-1.08	-1.7	.2518	97.9	+.0209	+8.3
1901	618	113.5	-51	-7.9	58.42	100.2	-1.53	-0.9	.2542	98.8	+.0185	+7.3
1902	717	125.6	-18	-2.5	58.41	100.2	-1.52	-0.9	.2603	101.2	+.0124	+4.8
1903	699	122.4			57.89	99.3			.2727	106.0		

PAINTERS, Male.

[Data for employees from 35 establishments for entire period. Data for hours and wages from 35 establishments, 1890-1899; 36 establishments, 1899-1903.]

Av. 1890-99.	1,222	100.0	-83	-6.8	57.92	100.0	-0.66	-1.1	\$0.2227	100.0	+\$0.0125	+5.4
1890	1,391	113.8	-252	-18.1	58.69	101.3	-1.43	-2.4	.2354	102.5	+.0088	+2.9
1891	1,321	112.5	-322	-25.1	58.53	101.1	-1.27	-2.2	.2351	102.4	+.0071	+3.0
1892	1,382	113.1	-243	-17.6	58.65	101.3	-1.39	-2.4	.2341	101.6	+.0058	+3.8
1893	1,376	112.0	-147	-10.7	58.70	101.4	-1.44	-2.5	.2369	103.1	+.0055	+2.2
1894	1,375	112.5	-164	-16.8	56.88	98.2	+1.38	-1.7	.2147	97.8	+.0175	+7.8
1895	1,072	87.7	-67	-6.3	57.41	99.1	-1.15	-1.3	.2216	96.5	+.0206	+9.3
1896	1,046	85.6	-83	-8.9	57.33	99.0	-1.07	-1.1	.2266	98.7	+.0156	+6.9
1897	1,015	83.1	-194	-20.5	56.81	98.1	+1.45	+4.8	.2315	100.8	+.0161	+7.3
1898	1,079	88.3	-60	-5.6	58.06	100.2	-1.80	-1.4	.2258	98.3	+.0164	+7.3
1899	1,236	101.1	-97	-7.8	58.18	100.4	-1.92	-1.6	.2264	98.6	+.0158	+7.0
1900	1,198	98.0	-99	-8.9	58.38	100.8	-1.12	-1.9	.2236	97.3	+.0186	+8.3
1901	1,265	103.5	-126	-10.0	57.78	99.8	-1.52	-1.9	.2284	99.4	+.0138	+6.0
1902	1,278	104.6	-139	-10.9	57.73	99.7	-1.47	-1.8	.2331	101.5	+.0091	+4.0
1903	1,139	93.2			57.26	98.9			.2422	103.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

CARS, STEAM RAILROAD—Continued.

PATTERN MAKERS, Male.

[Data for employees from 24 establishments for entire period. Data for hours and wages from 24 establishments, 1890-1898; 25 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	111	100.0	29	-26.1	57.15	100.0	-0.98	-1.7	\$0.2737	100.0	+\$0.0234	+8.5
1890	113	101.8	+27	+23.9	58.04	101.6	-1.87	-3.2	.2785	101.8	+ .0186	+ 6.7
1891	110	99.1	-30	-27.5	57.64	100.9	-1.47	-2.6	.2805	102.5	+ .0166	+ 5.9
1892	117	105.4	+23	+19.7	58.09	101.6	-1.92	-3.3	.2769	101.2	+ .0202	+ 7.3
1893	108	97.3	-32	-29.6	58.15	101.7	-1.98	-3.4	.2829	103.4	+ .0142	+ 5.0
1894	98	88.3	-42	-42.9	56.50	98.9	-3.33	-6.0	.2761	100.9	+ .0210	+ 7.6
1895	103	92.8	-37	-35.9	55.92	97.8	+ .25	+ .4	.2709	99.0	+ .0262	+ 9.7
1896	110	99.1	-20	-27.3	55.84	97.7	+ .33	+ .6	.2622	95.8	+ .0349	+ 12.5
1897	102	91.9	-38	-37.3	55.47	97.1	+ .70	+ 1.3	.2655	97.0	+ .0316	+ 11.9
1898	125	112.6	+15	+12.0	57.73	101.0	-1.56	-2.7	.2738	100.0	+ .0233	+ 8.5
1899	127	114.4	+13	+10.2	58.16	101.8	-1.99	-3.4	.2701	98.7	+ .0270	+ 10.0
1900	130	117.1	+10	+ 7.7	58.12	101.7	-1.95	-3.4	.2741	100.1	+ .0250	+ 9.4
1901	141	127.0	+ 1	+ .7	57.74	101.0	-1.57	-2.7	.2794	102.1	+ .0177	+ 6.3
1902	139	125.2	+ 1	+ .7	58.01	101.5	-1.84	-3.2	.2806	102.5	+ .0165	+ 5.9
1903	140	126.1			56.17	98.3			.2971	108.5		

PIPE FITTERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 6 establishments, 1890-1898; 7 establishments, 1899-1903.]

Av. 1890-99.	54	100.0	-21	-44.4	56.85	100.0	+0.27	+0.5	\$0.2338	100.0	+\$0.0155	+ 6.7
1890	55	101.9	+23	+41.8	58.25	102.5	-1.13	-1.9	.2484	103.6	+ .0089	+ 3.8
1891	51	94.4	+27	+52.9	58.37	102.7	-1.25	-2.1	.2325	97.0	+ .0228	+ 9.8
1892	61	113.0	+17	+27.9	58.72	103.3	-1.60	-2.7	.2394	95.7	+ .0250	+ 11.0
1893	67	124.1	+11	+16.1	58.25	102.5	-1.13	-1.9	.2439	101.7	+ .0114	+ 4.7
1894	50	92.6	-28	-56.0	53.70	94.5	+3.42	+6.1	.2157	102.5	+ .0096	+ 4.1
1895	51	94.4	-27	-52.9	54.98	96.7	+2.14	+3.9	.2386	99.5	+ .0167	+ 7.1
1896	47	87.0	-31	-66.0	54.77	96.3	+2.35	+4.3	.2346	99.2	+ .0173	+ 7.3
1897	51	94.4	-27	-52.9	54.82	96.4	+2.30	+4.2	.2388	99.6	+ .0165	+ 7.0
1898	52	96.3	-26	-50.0	58.06	102.1	- .91	-1.6	.2432	101.4	+ .0121	+ 5.0
1899	52	96.3	-26	-50.0	58.55	103.0	-1.43	-2.4	.2396	99.9	+ .0157	+ 6.7
1900	51	94.4	-27	-52.9	58.51	102.9	+ .59	+ .9	.2376	99.1	+ .0177	+ 7.4
1901	69	127.8	+ 9	+13.0	57.65	101.4	- .56	- .9	.2426	101.2	+ .0127	+ 5.2
1902	73	135.2	+ 5	+ 6.8	57.61	101.4	- .52	- .9	.2401	101.1	+ .0152	+ 6.4
1903	78	144.4			57.12	100.5			.2553	106.5		

TINSMITHS, Male.

[Data for employees from 24 establishments for entire period. Data for hours and wages from 24 establishments, 1890-1898; 25 establishments, 1899-1903.]

Av. 1890-99.	375	100.0	-103	-27.5	57.90	100.0	-1.41	-2.4	\$0.2348	100.0	+\$0.0448	+19.1
1890	355	94.7	-123	-31.6	59.14	102.1	-2.65	-4.5	.2365	98.2	+ .0490	+21.2
1891	384	102.4	-94	-24.5	58.52	101.1	-2.03	-3.5	.2379	97.1	+ .0517	+22.7
1892	352	93.9	-126	-33.8	58.56	101.1	-2.07	-3.5	.2315	102.9	+ .0381	+15.8
1893	374	99.7	-101	-27.8	58.23	100.6	-1.74	-3.0	.2382	101.4	+ .0414	+17.4
1894	362	96.5	-116	-31.0	57.32	97.3	- .17	- .3	.2286	97.8	+ .0500	+21.8
1895	346	92.7	-132	-38.1	57.07	98.6	- .58	-1.0	.2331	99.3	+ .0465	+19.9
1896	356	94.9	-122	-31.3	57.09	98.6	- .60	-1.1	.2391	101.3	+ .0465	+19.9
1897	357	95.2	-121	-33.9	56.87	98.2	- .58	- .7	.2402	102.3	+ .0394	+16.4
1898	440	117.3	+ 68	+ 8.6	58.63	101.3	-2.14	-3.7	.2268	96.6	+ .0528	+23.5
1899	425	113.3	+ 53	+ 7.3	58.61	101.2	-2.12	-3.6	.2410	102.6	+ .0386	+16.0
1900	435	116.0	+ 63	+ 9.9	59.01	102.0	-2.55	-4.3	.2427	103.4	+ .0369	+15.2
1901	477	127.2	+ 1	+ .2	58.50	101.7	-1.81	-3.1	.2428	103.4	+ .0368	+15.2
1902	485	129.3	+ 7	+ 1.4	58.05	100.3	-1.46	-2.7	.2435	112.2	+ .0161	+ 6.1
1903	478	127.5			56.49	97.6			.2796	119.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CARS, STEAM RAILROAD—Concluded.

UPHOLSTERERS, Male.

[Data from 25 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	174	100.0	+14	+ 8.0	58.16	100.0	-2.98	-5.1	\$0.2602	100.0	+\$0.6306	+11.8
1890	175	100.6	+13	+ 7.4	58.57	100.7	-3.39	-5.8	.2809	108.0	+.6099	+ 3.5
1891	202	116.1	-14	- 6.9	58.69	100.9	-3.51	-6.0	.2740	105.3	+.0168	- 6.1
1892	185	106.3	+ 3	+ 1.6	58.66	100.9	-3.48	-5.9	.2736	105.1	+.0172	+ 6.3
1893	210	120.7	-23	-10.5	58.78	101.1	-3.60	-6.1	.2783	107.0	+.0125	+ 4.5
1894	152	87.4	+36	+23.7	57.28	98.5	-2.10	-3.7	.2417	92.9	+.0491	+20.3
1895	154	88.5	+31	+22.1	57.38	98.7	-2.20	-3.8	.2523	97.0	+.0385	+15.3
1896	148	85.1	+40	+27.0	57.89	99.5	-2.71	-4.7	.2469	94.9	+.0439	+17.8
1897	159	91.4	+29	+18.2	57.58	99.0	-2.40	-4.2	.2504	96.2	+.0401	+16.1
1898	172	98.9	+16	+ 9.3	58.25	100.2	-3.07	-5.3	.2504	96.2	+.0401	+16.1
1899	179	102.9	+ 9	+ 5.0	58.48	100.6	-3.80	-5.6	.2530	97.2	+.0378	+14.9
1900	204	117.2	-16	- 7.8	58.75	101.0	-3.57	-6.1	.2553	98.1	+.0355	+13.9
1901	185	106.3	+ 3	+ 1.6	58.46	100.5	-3.28	-5.6	.2601	100.0	+.0307	+11.8
1902	183	105.2	+ 5	+ 2.7	58.18	100.0	-3.00	-5.2	.2703	103.9	+.0206	+ 7.6
1903	188	108.0			55.18	94.9			.2908	111.8		

CLOTHING, FACTORY PRODUCT.

BUTTONHOLE MAKERS, MACHINE, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0	+1	+16.7	59.57	100.0	-5.57	-9.4	\$0.0569	100.0	+\$0.0185	+32.5
1890	6	100.0	+1	+16.7	59.67	100.2	-5.67	-9.5	.0600	105.4	+.0154	+25.7
1891	6	100.0	-1	-16.7	59.67	100.2	-5.67	-9.5	.0600	105.4	+.0154	+25.7
1892	6	100.0	+1	+16.7	59.67	100.2	-5.67	-9.5	.0600	105.4	+.0154	+25.7
1893	7	116.7			59.57	100.0	-5.57	-9.4	.0575	101.1	+.0179	+31.1
1894	5	83.3	+2	+40.0	59.40	99.7	-5.40	-9.1	.0521	91.6	+.0233	+41.7
1895	5	83.3	+2	+40.0	59.40	99.7	-5.40	-9.1	.0521	91.6	+.0233	+41.7
1896	7	116.7			59.57	100.0	-5.57	-9.4	.0551	99.8	+.0203	+36.8
1897	7	116.7			59.57	100.0	-5.57	-9.4	.0575	101.1	+.0179	+31.1
1898	7	116.7			59.57	100.0	-5.57	-9.4	.0575	101.1	+.0179	+31.1
1899	7	116.7			59.57	100.0	-5.57	-9.4	.0575	101.1	+.0179	+31.1
1900	7	116.7			59.57	100.0	-5.57	-9.4	.0575	101.1	+.0179	+31.1
1901	6	100.0	-1	-16.7	58.00	97.4	-4.00	-6.9	.0614	107.9	+.0140	+22.8
1902	6	100.0	-1	-16.7	54.00	90.6			.0664	116.7	+.0090	-13.6
1903	7	116.7			54.00	90.6			.0754	132.5		

BUTTONHOLE MAKERS, MACHINE, Female.

[Data from 5 establishments.]

Av. 1890-99.	12	100.0	+2	+16.7	56.51	100.0	+0.39	-0.7	\$0.1092	100.0	+\$0.0001	+0.1
1890	12	100.0	+2	+16.7	57.57	102.0	- .74	-1.3	.1016	93.7	+.0047	+4.6
1891	12	100.0	+2	+16.7	57.57	102.0	- .74	-1.3	.1016	93.7	+.0047	+4.6
1892	12	100.0	+2	+16.7	57.67	102.0	- .74	-1.3	.1023	96.3	+.0040	+3.9
1893	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1019	96.0	+.0044	+4.3
1894	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1019	96.0	+.0044	+4.3
1895	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1019	96.0	+.0044	+4.3
1896	11	91.7	-3	-27.3	55.91	98.9	+1.02	-1.8	.1120	105.5	+.0057	+5.1
1897	11	91.7	-3	-27.3	55.91	98.9	+1.02	-1.8	.1120	105.5	+.0057	+5.1
1898	11	91.7	-3	-27.3	55.91	98.9	+1.02	-1.8	.1170	110.2	+.0107	+9.1
1899	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1090	103.2	+.0033	+3.0
1900	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1052	99.1	+.0111	+1.0
1901	12	100.0	+2	+16.7	56.17	99.3	+ .76	-1.4	.1056	99.4	+.0007	+ .7
1902	13	108.3	+1	+ 7.7	56.00	99.0	+ .93	-1.7	.1028	96.8	+.0035	+3.4
1903	14	116.7			56.93	100.7			.1093	109.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

CLOTHING, FACTORY PRODUCT—Continued.

CUTTERS, HAND, Male.

[Data from 8 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	21	100.0	+5	-23.8	59.07	100.0	+0.05	+0.1	\$0.3901	100.0	-\$0.0082	-2.1
1890	19	90.5	+7	-36.8	59.21	100.2	-0.09	-1.2	.4043	103.6	-0.0060	-1.5
1891	19	90.5	+7	-36.8	59.21	100.2	-0.09	-1.2	.4043	103.6	-0.0060	-1.5
1892	21	100.0	+5	-23.8	59.11	100.1	-0.02	-0.3	.3863	99.0	-0.0120	-3.1
1893	20	95.2	+6	-30.0	59.10	100.1	+0.02	+0.3	.3881	102.1	-0.0021	-0.5
1894	21	100.0	+5	-23.8	59.14	100.1	-0.02	-0.3	.3830	98.4	-0.0144	-3.7
1895	21	100.0	+5	-23.8	59.00	99.9	+0.12	+1.2	.3803	99.8	-0.0090	-2.3
1896	21	100.0	+5	-23.8	59.00	99.9	+0.12	+1.2	.3803	99.8	-0.0090	-2.3
1897	22	104.8	+4	+18.2	58.91	99.7	-0.21	-1.1	.3897	99.9	-0.0096	-2.5
1898	23	109.5	+3	+13.0	58.96	99.8	+0.16	+1.3	.3814	97.8	-0.0169	-4.4
1899	24	114.3	+2	+8.3	59.00	99.9	+0.12	+1.2	.3745	96.0	-0.0228	-5.8
1900	23	109.5	+3	+13.0	58.96	99.8	+0.16	+1.3	.4019	103.8	-0.0066	-1.6
1901	25	119.0	+1	+1.0	58.92	99.7	-0.20	-1.3	.3924	100.6	-0.0059	-1.5
1902	27	128.6	+1	+3.7	59.00	99.9	+0.12	+1.2	.3788	97.1	-0.0155	-4.0
1903	26	123.8			59.12	100.1			.3983	102.1		

CUTTERS, MACHINE, Male.

[Data from 7 establishments.]

Av. 1890-99.	17	100.0	2	11.8	57.95	100.0	-0.79	-1.4	\$0.2440	100.0	-\$0.0176	-7.2
1890	18	105.9	1	+5.6	58.00	100.1	-0.84	-1.4	.2459	100.8	-0.0157	-6.4
1891	18	105.9	1	+5.6	58.00	100.1	-0.84	-1.4	.2459	100.8	-0.0157	-6.4
1892	19	111.8			58.11	100.3	-0.36	-1.6	.2435	99.8	-0.0181	-7.4
1893	18	105.9	1	+5.6	58.00	100.1	-0.84	-1.4	.2459	100.8	-0.0157	-6.4
1894	17	100.0	-2	-11.8	58.00	100.1	-0.84	-1.4	.2549	96.7	-0.0257	-10.2
1895	16	94.1	-3	-18.8	57.88	99.9	-0.72	-1.2	.2433	99.7	-0.0181	-7.4
1896	16	94.1	-3	-18.8	57.88	99.9	-0.72	-1.2	.2433	99.7	-0.0181	-7.4
1897	16	94.1	-3	-18.8	57.88	99.9	-0.72	-1.2	.2401	98.4	-0.0215	-8.8
1898	16	94.1	-3	-18.8	57.88	99.9	-0.72	-1.2	.2438	99.9	-0.0178	-7.3
1899	15	88.2	-5	-30.0	58.00	100.1	-0.84	-1.4	.2523	103.4	-0.0063	-1.6
1900	18	105.9	1	+5.6	58.00	100.1	-0.84	-1.4	.2529	103.6	-0.0057	-1.4
1901	19	111.8			57.89	99.9	-0.75	-1.3	.2530	103.7	-0.0086	-3.5
1902	19	111.8			57.97	99.9	-0.21	-1.4	.2589	106.1	-0.0227	-9.3
1903	19	111.8			57.96	98.6			.2616	107.2		

EXAMINERS, Female.

[Data from 4 establishments.]

Av. 1890-99.	14	100.0	13	141.8	58.99	100.0	1.73	3.0	\$0.1625	100.0	-\$0.0177	-11.4
1890	17	120.0	19	141.8	58.96	99.9	1.70	2.9	.1599	98.0	-0.0151	-9.3
1891	17	120.0	19	141.8	58.96	99.9	1.70	2.9	.1599	98.0	-0.0151	-9.3
1892	18	128.6	18	130.0	58.17	100.1	1.81	3.1	.1535	94.7	-0.0107	-6.5
1893	17	120.0	19	141.8	58.96	99.9	1.70	2.9	.1549	98.0	-0.0151	-9.3
1894	15	88.2	-5	-30.0	58.11	100.4	1.97	3.4	.1524	99.9	-0.0176	-11.4
1895	15	88.2	-5	-30.0	58.11	100.4	1.97	3.4	.1540	100.4	-0.0182	-11.7
1896	15	88.2	-5	-30.0	58.11	100.4	1.97	3.4	.1541	100.7	-0.0186	-11.9
1897	14	88.2	-5	-30.0	58.11	99.6	1.75	2.6	.1462	102.8	-0.0214	-13.7
1898	15	88.2	-5	-30.0	57.87	99.6	1.74	2.6	.1551	102.0	-0.0203	-13.0
1899	19	141.8	17	89.5	58.00	99.8	1.63	2.8	.1533	105.1	-0.0245	-17.6
1900	21	153.5	15	71.4	58.10	100.0	1.74	3.0	.1577	103.6	-0.0225	-16.4
1901	21	153.5	15	71.4	58.10	99.6	1.47	2.5	.1521	107.2	-0.0273	-18.2
1902	23	164.3	17	104.3	57.83	98.8	1.93	3.8	.1460	87.5	-0.0312	-19.8
1903	26	211.8			57.96	97.0			.1418	86.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899 = 100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CLOTHING, FACTORY PRODUCT—Continued.

FINISHERS, Female.

[Data from 7 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	63	100.0	+27	+42.9	56.48	100.0	-0.89	-1.6	\$0.0874	100.0	+\$0.0010	+1.1
1890	57	90.5	+33	+57.9	56.93	100.8	-1.34	-2.4	.0875	100.1	+.0009	+1.0
1891	57	90.5	+33	+57.9	56.93	100.8	-1.34	-2.1	.0875	100.1	+.0009	+1.0
1892	62	98.4	+28	+45.2	56.69	100.4	-1.10	-1.9	.0858	98.2	+.0026	+3.0
1893	61	95.8	+29	+47.5	56.66	100.3	-1.07	-1.9	.0858	97.9	+.0028	+3.3
1894	56	88.9	+34	+60.7	56.89	100.7	-1.30	-2.3	.0856	97.9	+.0028	+3.3
1895	57	90.5	+33	+57.9	56.51	100.1	-.92	-1.6	.0885	101.3	-.0001	-.1
1896	59	93.7	+31	+52.5	56.12	99.4	-.53	-.9	.0885	101.3	-.0001	-.1
1897	65	103.2	+25	+38.5	55.11	99.3	-.52	-.9	.0865	101.3	-.0001	-.1
1898	73	115.9	+17	+23.3	56.00	99.2	-.41	-.7	.0894	102.3	-.0010	-1.1
1899	78	123.8	+12	+15.4	55.91	99.0	-.32	-.6	.0867	99.2	+.0017	+2.0
1900	87	138.1	+3	+3.4	55.91	99.0	-.32	-.6	.0876	100.2	+.0008	+.9
1901	84	133.3	-6	-7.1	55.63	98.6	-.01	-.1	.0903	103.3	-.0019	-2.1
1902	93	147.6	-3	-3.2	55.66	98.4	-.01	-.02	.0885	101.3	-.0001	-.1
1903	90	142.9			55.59	98.4			.0884	101.1		

PRESSERS, Male.

[Data for employees from 7 establishments for entire period. Data for hours and wages from 8 establishments, 1890-1899; 7 establishments, 1900-1903.]

Av. 1890-99.	26	100.0	+1	+3.8	58.19	100.0	-0.97	-1.7	\$0.1722	100.0	+\$0.0032	+13.5
1890	28	107.7	-1	-3.6	58.31	100.2	-1.06	-1.9	.1729	100.4	+.0225	+13.0
1891	28	107.7	-1	-3.6	58.31	100.2	-1.09	-1.9	.1729	100.4	+.0225	+13.0
1892	29	111.5	-2	-6.9	58.37	100.3	-1.15	-2.0	.1727	100.3	+.0227	+13.1
1893	26	100.0	+1	+3.8	58.19	100.0	-.97	-1.7	.1788	103.9	+.0165	+9.2
1894	29	111.5	-2	-6.9	58.37	100.3	-1.15	-2.0	.1727	100.3	+.0227	+13.1
1895	30	115.4	-3	-10.0	58.32	100.2	-1.10	-1.9	.1723	100.1	+.0231	+13.4
1896	23	88.5	+4	+17.4	57.96	99.6	-.74	-1.3	.1667	96.8	+.0287	+17.2
1897	23	88.5	+4	+17.4	58.00	99.7	-.78	-1.3	.1636	95.0	+.0318	+19.4
1898	21	92.3	-3	-12.5	58.08	99.8	-.86	-1.5	.1679	97.5	+.0275	+16.4
1899	21	88.5	+4	+17.4	58.00	99.7	-.78	-1.3	.1812	105.2	+.0142	+7.8
1900	27	103.8			58.07	99.8	-.85	-1.5	.1807	104.9	+.0147	+8.1
1901	30	115.4	-3	-10.0	58.13	99.9	-.91	-1.6	.1884	109.4	+.0070	+3.7
1902	28	107.7	-1	-3.6	58.11	99.9	-.89	-1.5	.1912	111.0	+.0042	+2.2
1903	27	103.8			57.22	98.3			.1854	113.5		

PRESSERS, Female.

[Data from 3 establishments.]

Av. 1890-99.	39	100.0	+25	+64.1	55.69	100.0	-0.02	-0.04	\$0.0736	100.0	\$0.0030	4.1
1890	40	102.6	+24	+60.0	55.75	100.1	-.08	-.1	.0753	102.3	+.0013	+1.7
1891	40	102.6	+24	+60.0	55.75	100.1	-.08	-.1	.0753	102.3	+.0013	+1.7
1892	41	105.1	-23	-56.1	55.71	100.0	-.04	-.1	.0755	103.1	+.0007	+.9
1893	41	105.1	-23	-56.1	55.71	100.0	-.04	-.1	.0759	103.1	+.0007	+.9
1894	32	82.1	+32	+100.0	55.69	100.0	-.02	-.04	.0636	86.4	+.0130	+20.4
1895	34	87.2	+30	+88.2	55.71	100.0	-.04	-.1	.0659	90.9	+.0097	+14.5
1896	40	102.6	+24	+60.0	55.68	100.0	-.01	-.02	.0738	103.3	+.0028	+3.8
1897	41	105.1	-23	-56.1	55.63	99.9	+.04	+.1	.0760	103.3	+.0006	+.8
1898	41	105.1	-23	-56.1	55.63	99.9	+.04	+.1	.0760	103.3	+.0006	+.8
1899	44	112.8	-20	-45.5	55.61	99.9	+.06	+.1	.0775	105.3	-.0009	-1.2
1900	47	120.5	+17	+36.2	55.62	99.9	+.05	+.1	.0796	108.2	+.0030	+3.8
1901	54	138.5	+10	+18.5	55.67	100.0			.0809	109.9	+.0043	+5.3
1902	59	151.3	+5	+8.5	55.65	99.9	-.02	-.04	.0778	105.7	+.0012	+1.5
1903	64	164.1			55.67	100.0			.0766	104.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CLOTHING, FACTORY PRODUCT—Concluded.

SEWING-MACHINE OPERATORS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890-1901; 2 establishments, 1902, 1903.]

Year.	Employees.			Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
Av. 1890-99.	12	100.0	-1	59.00	100.0	-4.93	-8.4	\$0.2646	100.0	\$0.0221	-
1890	10	83.3	+3	59.00	100.0	-4.93	-8.4	.2627	99.3	-.0240	-2.1
1891	10	83.3	-3	59.00	100.0	-4.93	-8.4	.2627	99.3	-.0240	-2.1
1892	11	91.7	-2	59.00	100.0	-4.93	-8.4	.2606	101.9	-.0171	-6.1
1893	11	91.7	+2	59.00	100.0	-4.93	-8.4	.2606	101.9	-.0171	-6.1
1894	13	108.3		59.00	100.0	-4.93	-8.4	.2608	98.6	-.0259	-9.2
1895	13	108.3		59.00	100.0	-4.93	-8.4	.2608	98.6	-.0259	-9.2
1896	10	83.3	-5	59.00	100.0	-4.93	-8.4	.2627	99.3	-.0240	-2.1
1897	13	108.3		59.00	100.0	-4.93	-8.4	.2608	98.6	-.0259	-9.2
1898	13	108.3		59.00	100.0	-4.93	-8.4	.2608	98.6	-.0259	-9.2
1899	12	100.0	+1	59.00	100.0	-4.93	-8.4	.2751	104.1	-.0113	-4.1
1900	13	108.3		54.00	91.5	-.07	-1.1	.2738	103.5	-.0129	-4.7
1901	13	108.3		54.00	91.5	-.07	-1.1	.2990	113.0	-.0124	-4.1
1902	13	108.3		54.28	92.0	-.21	-3.4	.2522	95.3	-.0245	-17.7
1903	13	108.3		54.07	91.6			.2867	108.4		

SEWING-MACHINE OPERATORS, Female.

[Data from 9 establishments.]

Year.	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
Av. 1890-99.	30	100.0	-71	57.46	100.0	-9.43	-0.7	\$0.0828	100.0	\$0.0085	-11.5
1890	781	94.1	-129	57.56	100.2	-.53	-.9	.0867	97.5	-.0116	-14.1
1891	746	101.9	-55	57.41	99.9	-.38	-.7	.0823	99.4	-.0100	-12.2
1892	818	98.6	-83	57.45	100.0	-.42	-.7	.0837	101.1	-.0086	-10.6
1893	738	88.9	-163	57.72	100.5	-.69	-1.2	.0818	98.8	-.0105	-12.8
1894	812	97.8	-89	57.53	100.1	-.50	-.9	.0800	96.6	-.0123	-15.0
1895	829	99.9	-72	57.57	100.2	-.54	-.9	.0806	97.3	-.0117	-14.5
1896	803	96.7	-98	57.41	100.0	-.41	-.7	.0825	99.6	-.0088	-11.0
1897	860	103.6	-41	57.29	99.7	-.26	-.5	.0800	99.0	-.0103	-12.0
1898	923	111.2	-22	57.22	99.6	-.19	-.3	.0875	105.7	-.0048	-5.7
1899	891	107.3	-10	57.37	99.8	-.34	-.6	.0873	105.4	-.0050	-5.9
1900	879	105.9	-22	57.46	100.0	-.43	-.7	.0853	103.0	-.0070	-8.3
1901	898	108.2	+3	57.41	100.0	-.41	-.7	.0823	104.2	-.0060	-7.1
1902	826	99.5	-75	57.29	99.5	-.17	-.3	.0899	108.6	-.0024	-2.8
1903	901	108.6		57.03	99.3			.0923	111.5		

CLOTHING, MEN'S, CUSTOM WORK.

BUSHELMEYER, Male.

[Data from 11 establishments.]

Year.	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
Av. 1890-99.	111	100.0	-19	60.69	100.0	-1.34	2.2	\$0.2113	100.0	\$0.0740	-2.8
1890	103	92.8	-27	59.95	99.8	-1.20	2.0	.2431	100.7	-.0122	-1.5
1891	102	91.9	-28	59.95	99.8	-1.20	2.0	.2455	101.7	-.0088	-4.3
1892	106	95.5	-24	59.94	99.8	-1.19	2.0	.2457	100.6	-.0126	-5.2
1893	107	96.4	-23	59.94	99.8	-1.19	2.0	.2415	100.1	-.0138	-5.7
1894	105	94.6	-25	60.37	100.8	-1.82	3.0	.2363	97.9	-.0190	-8.9
1895	109	98.2	-21	60.50	100.7	-1.75	2.9	.2374	98.4	-.0179	-7.5
1896	116	104.5	-14	59.95	99.8	-1.20	2.0	.2340	97.1	-.0203	-8.8
1897	116	104.5	-14	60.47	100.6	-1.72	2.8	.2401	99.5	-.0152	-6.5
1898	124	111.7	-6	59.96	99.7	-1.15	1.9	.2437	101.0	-.0116	-4.5
1899	121	109.0	-9	59.79	99.4	-.95	1.6	.2481	102.8	-.0072	-2.9
1900	120	108.1	-10	59.39	98.7	-.75	1.9	.2404	103.8	-.0049	-2.0
1901	122	109.9	-8	59.31	98.7	-.76	1.9	.2515	104.2	-.0038	-1.5
1902	127	114.4	-5	59.29	98.5	-.75	1.9	.2526	104.7	-.0027	-1.1
1903	130	117.1		58.75	97.8			.2543	105.8		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

CLOTHING, MEN'S, CUSTOM WORK—Continued.

BUSHEL MEN, Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890-1895; 2 establishments, 1896, 1897; 3 establishments, 1898-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	\$0.1211	100.0	+\$0.0060	+5.0
1890	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1891	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1892	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1893	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1894	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1895	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1250	103.2	+.0021	+1.7
1896	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1167	96.4	+.0104	+8.9
1897	3	150.0	+1	+33.3	60.00	100.0	-1.50	-2.5	.1188	98.1	+.0083	-7.0
1898	3	150.0	+1	+33.3	60.00	100.0	-1.50	-2.5	.1125	92.9	+.0146	+13.0
1899	2	100.0	+2	+100.0	60.00	100.0	-1.50	-2.5	.1133	93.6	+.0138	+12.2
1900	3	150.0	+1	+33.3	60.00	100.0	-1.50	-2.5	.1167	96.4	+.0104	+8.9
1901	4	200.0			60.00	100.0	-1.50	-2.5	.1214	100.2	+.0057	+4.7
1902	4	200.0			60.00	100.0	-1.50	-2.5	.1229	101.5	+.0042	+3.4
1903	4	200.0			58.50	97.5			.1271	105.0		

COAT MAKERS, Male.

[Data from 14 establishments.]

Av. 1890-99.	104	100.0	+26	+25.0	58.98	100.0	-2.40	-4.1	\$0.3157	100.0	+\$0.0371	+11.8	
1890	95	91.3	+35	+36.8	60.06	101.6	-3.48	-5.8	.3000	95.0	+	.0528	+17.6
1891	94	90.4	+36	+38.3	59.04	100.1	-2.46	-4.2	.3023	95.7	+	.0505	+16.7
1892	104	100.0	+26	+25.0	59.02	100.1	-2.44	-4.1	.3003	95.1	+	.0525	+17.5
1893	109	104.8	+21	+19.3	59.06	100.1	-2.48	-4.2	.3108	98.4	+	.0420	+13.5
1894	100	96.2	+30	+30.0	59.10	100.2	-2.52	-4.3	.3383	107.2	+	.0145	+4.3
1895	102	98.1	+28	+27.5	59.12	100.2	-2.54	-4.3	.3372	106.8	+	.0156	+4.6
1896	103	99.0	+27	+26.2	59.13	100.3	-2.55	-4.3	.3155	99.9	+	.0373	+11.8
1897	108	103.8	+22	+20.4	59.00	100.0	-2.42	-4.1	.3140	99.5	+	.0388	+12.4
1898	106	101.9	+24	+22.6	58.08	98.5	-1.50	-2.6	.3233	102.4	+	.0295	+9.1
1899	116	111.5	+14	+12.1	58.14	98.6	-1.56	-2.7	.3153	99.9	+	.0375	+11.9
1900	122	117.3	+8	+6.6	57.34	97.2	-1.76	-1.3	.3357	106.3	+	.0171	+5.1
1901	122	117.3	+8	+6.6	57.34	97.2	-1.76	-1.3	.3373	106.8	+	.0155	+4.6
1902	126	121.2	+4	+3.2	57.38	97.3	-1.80	-1.4	.3447	109.2	+	.0081	+2.4
1903	130	125.0			56.58	95.9			.3528	111.8			

CUTTERS, Male.

[Data from 34 establishments.]

Av. 1890-99.	75	100.0	+ 9	+12.0	58.14	100.0	-1.66	-2.9	\$0.5286	100.0	-\$0.0307	+5.8
1890	77	102.7	+ 7	+ 9.1	58.17	100.1	-1.69	-2.9	.5280	99.9	+.0313	+5.9
1891	75	100.0	+ 9	+12.0	58.12	100.0	-1.64	-2.8	.5320	100.6	+.0273	+5.1
1892	75	100.0	+ 9	+12.0	58.12	100.0	-1.64	-2.8	.5330	100.8	+.0263	+4.9
1893	76	101.3	+ 8	+10.5	58.30	100.3	-1.82	-3.1	.5362	101.4	+.0231	+4.3
1894	71	94.7	+13	+18.3	58.18	100.1	-1.70	-2.9	.5281	99.9	+.0312	+5.9
1895	71	94.7	+13	+18.3	58.18	100.1	-1.70	-2.9	.5321	100.7	+.0269	+5.1
1896	76	101.3	+ 8	+10.5	58.30	100.3	-1.82	-3.1	.5171	97.8	+.0422	+8.2
1897	75	100.0	+ 9	+12.0	58.20	100.1	-1.72	-3.0	.5223	98.8	+.0370	+7.1
1898	77	102.7	+ 7	+ 9.1	57.94	99.7	-1.46	-2.5	.5264	99.6	+.0329	+6.3
1899	78	104.0	+ 6	+ 7.7	57.85	99.5	-1.37	-2.4	.5302	100.3	+.0291	+5.5
1900	77	102.7	+ 7	+ 9.1	57.74	99.3	-1.26	-2.2	.5371	101.6	+.0222	+4.1
1901	80	106.7	+ 4	+ 5.0	57.45	98.8	-1.97	-1.7	.5446	103.0	+.0117	+2.7
1902	82	109.3	+ 2	+ 2.4	57.22	98.4	-1.74	-1.3	.5515	104.3	+.0078	+1.4
1903	84	112.0			56.48	97.1			.5593	105.8		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899 = 100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

CLOTHING, MEN'S, CUSTOM WORK—Concluded.

PANTS MAKERS, Male.

[Data from 13 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Rela-tive num-ber.	Num-ber.	Per-cent.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase-decrease 1903 as com-pared with year specified.
			Num-ber.	Per-cent.				Num-ber.	Per-cent.			Amount.
Av. 1890-99.	41	100.0	+	-12.2	59,069	100.0	-2.42	-4.1	\$0.2189	100.0	+	\$0.0051
1890.	40	97.6	+	-15.0	59,25	100.0	-2.61	-4.5	.2179	99.6	+	.0042
1891.	39	95.1	+	-17.9	59,23	100.3	-2.62	-4.4	.2189	100.0	+	.0050
1892.	40	97.6	+	-15.0	59,25	100.4	-2.61	-4.5	.2176	99.4	+	.0048
1893.	40	97.6	+	-15.0	59,25	100.4	-2.64	-4.5	.2190	100.0	+	.0050
1894.	38	92.7	+	-21.1	59,21	100.3	-2.60	-4.4	.2187	99.9	+	.0050
1895.	39	95.1	+	-17.9	59,25	100.5	-2.62	-4.4	.2183	99.7	+	.0048
1896.	42	102.4	+	-9.5	59,14	100.2	-2.59	-4.3	.2178	99.5	+	.0047
1897.	39	95.1	+	-17.9	59,23	100.3	-2.62	-4.4	.2166	101.4	+	.0051
1898.	40	97.6	+	-15.0	58,05	98.3	-1.41	-2.5	.2116	105.1	+	.0047
1899.	39	95.1	+	-16.1	58,47	99.1	-1.86	-3.2	.2176	95.4	+	.0046
1900.	43	104.9	+	-7.0	57,21	96.9	-1.60	-1.0	.2185	115.1	+	.0172
1901.	45	109.8	+	-2.2	57,33	97.1	-1.72	-1.3	.2199	116.4	+	.0144
1902.	45	109.8	+	-2.2	57,33	97.1	-1.72	-1.3	.2211	116.9	+	.0153
1903.	46	112.2			56,01	95.9			.2201	122.1		

PANTS MAKERS, Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishments, 1890-1898, 1 establishment, 1899, 2 establishments, 1900-1903.]

Av. 1890-99.	31	100.0	+	-17.6	56,02	100.0	0.97	1.7	\$0.1104	100.0	+	\$0.0475
1890.	36	94.1	+	-25.0	56,31	100.5	-1.26	-2.2	.1111	103.4	+	.0159
1891.	36	94.1	+	-25.0	56,36	100.2	-1.11	-2.0	.1120	101.4	+	.0160
1892.	36	94.1	+	-25.0	56,31	100.5	-1.26	-2.2	.1111	103.4	+	.0159
1893.	36	94.1	+	-25.0	56,37	100.0	-1.52	-2.7	.1125	105.7	+	.0115
1894.	36	94.1	+	-25.0	56,31	100.4	-1.26	-2.2	.1077	97.6	+	.0087
1895.	36	94.1	+	-25.0	56,36	100.2	-1.11	-2.0	.1066	96.6	+	.0074
1896.	38	103.0	+	-11.1	55,14	100.2	-1.09	-1.9	.1089	99.5	+	.0079
1897.	39	116.0	+	-10.0	55,14	100.1	-1.20	-2.1	.1111	103.6	+	.0079
1898.	39	116.0	+	-10.0	55,14	100.1	-1.20	-2.1	.1117	101.2	+	.0076
1899.	39	116.0	+	-10.0	55,14	98.4	-1.60	-1.9	.0967	87.6	+	.0071
1900.	39	116.0	+	-10.0	55,14	101.1	-1.62	-2.9	.1194	108.2	+	.0088
1901.	39	116.0	+	-10.0	55,14	101.1	-1.62	-2.9	.1205	109.1	+	.0075
1902.	39	116.0	+	-10.0	55,14	101.1	-1.62	-2.9	.1208	109.1	+	.0072
1903.	39	116.0	+	-10.0	55,14	101.1	-1.62	-2.9	.1209	115.2	+	

COOPERAGE.

COOPERS, SLACK BARRELS, Male.

[Data from 1 establishment.]

Av. 1890-99.	24	100.0	+	-8.8	28,00	100.0	0.4	0.020	1.26	100.0	+	\$0.0020
1890.	24	100.0	+	-8.8	28,00	100.0	0.4	1.0	.249	100.7	+	.0020
1891.	24	100.0	+	-8.8	28,00	100.0	0.4	1.1	.262	101.3	+	.0022
1892.	24	100.0	+	-8.8	28,00	100.0	0.4	1.0	.287	95.0	+	.0022
1893.	24	100.0	+	-8.8	28,00	100.0	0.4	1.0	.282	96.9	+	.0022
1894.	24	100.0	+	-8.8	28,00	100.0	0.4	1.0	.219	105.8	+	.0025
1895.	28	116.7	+	-4.1	28,00	100.0	0.4	1.0	.234	105.7	+	.0024
1896.	30	125.0	+	-1.1	28,00	100.0	0.4	1.0	.257	102.3	+	.0025
1897.	28	116.7	+	-4.1	28,00	100.0	0.4	1.0	.250	98.1	+	.0020
1898.	24	100.0	+	-8.8	28,00	100.0	0.4	1.1	.216	96.2	+	.0020
1899.	24	100.0	+	-8.8	28,00	100.0	0.4	1.2	.250	108.1	+	.0020
1900.	30	125.0	+	-1.1	28,00	100.0	0.4	1.3	.241	105.1	+	.0020
1901.	30	125.0	+	-1.1	28,00	100.0	0.4	1.1	.261	103.0	+	.0028
1902.	30	125.0	+	-1.1	28,00	100.0	0.4	1.1	.261	103.0	+	.0028
1903.	30	125.0	+	-1.1	28,00	100.0	0.4	1.1	.269	111.3	+	

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (−) in 1903, as compared with previous years, see note on page 718.]

COOPERAGE—Continued.

COOPERS, TIGHT BARRELS, Male.

[Data from 13 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (−) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (−) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (−) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	197	100.0	+19	+ 9.6	59.49	100.0	−1.99	−3.3	\$0.2122	100.0	−\$0.0222	−10.5
1890	164	85.3	+48	+28.6	59.56	100.1	−2.06	−3.5	.2169	102.2	−.0175	+ 8.1
1891	186	95.9	+27	+14.3	59.54	100.1	−2.04	−3.4	.2155	101.6	−.0189	+ 8.8
1892	195	99.0	+21	+10.8	59.56	100.1	−2.06	−3.5	.2120	100.4	−.0214	+10.0
1893	162	82.2	+34	+33.3	59.44	99.9	−1.94	−3.3	.2086	98.3	−.0258	+12.4
1894	209	106.1	+ 7	+ 3.3	59.59	100.2	−2.09	−3.5	.2081	98.1	−.0253	+12.6
1895	190	96.4	+26	+13.7	59.50	100.0	−2.00	−3.4	.2087	98.4	−.0257	+12.3
1896	198	101.0	+17	+ 8.5	59.49	100.0	−1.99	−3.3	.2155	101.6	−.0189	+ 8.8
1897	208	105.6	+ 8	+ 3.8	59.49	100.0	−1.99	−3.3	.2113	99.6	−.0231	+10.9
1898	212	107.6	+ 4	+ 1.9	59.32	99.7	−1.82	−3.1	.2115	99.7	−.0229	+10.8
1899	235	119.3	−19	− 8.1	59.38	99.8	−1.88	−3.2	.2131	100.4	−.0213	+10.0
1900	227	115.2	−11	− 4.8	59.03	99.2	−1.55	−2.6	.2158	101.7	−.0186	+ 8.6
1901	225	114.2	− 9	− 4.0	58.48	98.3	−.98	−1.7	.2247	105.9	−.0097	+ 4.3
1902	213	108.1	+ 3	+ 1.4	58.60	98.5	−1.10	−1.9	.2265	106.7	−.0079	+ 3.5
1903	216	109.6			57.50	96.7			.2344	110.5		

CROZERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0	−1	−16.7	58.33	100.0	−4.33	−7.4	\$0.1968	100.0	−\$0.0715	−36.3
1890	6	100.0	−1	−16.7	60.00	102.9	−6.00	−10.0	.1718	87.3	−.0965	−66.2
1891	5	83.3			60.00	102.9	−6.00	−10.0	.1737	88.3	−.0946	−64.5
1892	5	83.3			60.00	102.9	−6.00	−10.0	.1955	99.3	−.0728	−37.2
1893	5	83.3			60.00	102.9	−6.00	−10.0	.1954	99.3	−.0729	−37.3
1894	5	83.3			60.00	102.9	−6.00	−10.0	.2040	103.7	−.0643	−31.5
1895	6	100.0	−1	−16.7	57.00	97.7	−3.00	−5.3	.2312	117.5	−.0371	+16.0
1896	7	116.7	−2	−28.6	56.57	97.0	−2.57	−4.5	.2019	101.1	−.0634	−30.9
1897	6	100.0	−1	−16.7	57.00	97.7	−3.00	−5.3	.2009	102.1	−.0674	−33.5
1898	8	133.3	−3	−37.5	57.00	97.7	−3.00	−5.3	.2098	106.4	−.0585	−27.9
1899	7	116.7	−2	−28.6	55.71	95.5	−1.71	−3.1	.1804	91.7	−.0879	−48.7
1900	6	100.0	1	+16.7	54.00	92.6			.1968	94.9	−.0815	−43.6
1901	7	116.7	−2	−28.6	54.00	92.6			.1933	98.2	−.0750	−38.8
1902	5	83.3			54.00	92.6			.2291	116.4	−.0392	+17.1
1903	5	83.3			54.00	92.6			.2383	126.3		

HEADERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	26	100.0	−5	−19.2	59.43	100.0	−5.43	−9.1	\$0.2061	100.0	−\$0.0215	+11.9
1890	9	34.6	+12	+133.3	60.00	101.0	−6.00	−10.0	.1880	91.1	−.0429	+22.8
1891	8	30.8	−13	−162.5	60.00	101.0	−6.00	−10.0	.1848	89.5	−.0461	+24.9
1892	25	88.5	−2	− 8.7	60.00	101.0	−6.00	−10.0	.2054	99.5	−.0253	+12.4
1893	20	76.9	+ 1	+ 6.0	60.00	101.0	−6.00	−10.0	.2155	104.4	−.0184	+ 7.1
1894	47	180.8	−26	−53.3	60.00	101.0	−6.00	−10.0	.2158	106.0	−.0121	+ 5.5
1895	29	111.5	−8	−27.6	59.38	99.9	−5.38	−9.1	.2166	104.9	−.0143	+ 6.6
1896	41	157.7	−20	−48.8	59.56	100.2	−5.56	−9.3	.2195	106.3	−.0114	+ 5.2
1897	32	123.1	−11	−24.4	59.25	99.7	−5.25	−8.9	.2156	104.5	−.0133	+ 7.1
1898	21	80.8			58.57	98.6	−4.57	−7.8	.2048	99.2	−.0281	+12.7
1899	29	111.5	−8	−27.6	57.52	96.8	−3.52	−6.1	.1947	91.3	−.0662	+18.6
1900	27	103.8	−6	−22.2	54.00	90.9			.1965	95.2	−.0444	+17.6
1901	20	76.9	+ 1	+ 6.0	54.00	90.9			.1859	90.1	−.0450	+24.2
1902	22	84.6	−1	− 4.5	54.00	90.9			.2176	105.4	−.0132	+ 6.1
1903	21	80.8			54.00	90.9			.2309	111.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

COOPERAGE—Continued.

HEATERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	5	100.0	+3	+37.5	58.85	100.0	-4.85	-8.2	\$0.1849	100.0	+\$0.0093	+5.0
1890	11	137.5	.....	.....	60.00	102.0	-6.00	-10.0	.1673	90.6	-.0269	-14.5
1891	8	100.0	-3	+37.5	60.00	102.0	-6.00	-10.0	.1714	92.7	-.0228	-13.3
1892	9	112.5	+2	+22.2	60.00	102.0	-6.00	-10.0	.1647	89.1	-.0285	-15.2
1893	9	112.5	+2	+22.2	60.00	102.0	-6.00	-10.0	.1589	85.9	-.0375	-20.2
1894	7	87.5	+4	+57.1	60.00	102.0	-6.00	-10.0	.1715	92.8	-.0227	-13.2
1895	6	75.0	+5	+83.3	58.00	98.6	-4.00	-6.9	.2244	121.4	-.0302	-17.0
1896	8	100.0	+3	+37.5	57.50	99.4	-4.50	-7.7	.2065	111.7	-.0123	-6.7
1897	6	75.0	+5	+83.3	58.00	98.6	-4.00	-6.9	.2126	115.0	-.0184	-8.7
1898	8	100.0	+3	+37.5	57.00	96.9	-3.00	-5.3	.1976	106.9	-.0054	-2.9
1899	8	100.0	+3	+37.5	57.00	96.9	-3.00	-5.3	.1739	94.1	-.0205	-11.7
1900	7	87.5	+4	+57.1	54.00	91.8	.....	.....	.1782	96.4	-.0100	-5.4
1901	9	112.5	+2	+22.2	54.00	91.8	.....	.....	.1700	91.9	-.0242	-13.1
1902	9	112.5	+2	+22.2	54.00	91.8	.....	.....	.1775	96.0	-.0157	-8.4
1903	11	137.5	.....	.....	54.00	91.8	.....	.....	.1942	105.0	.....	.....

HOOPERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0	-3	-50.0	59.33	100.0	-5.33	-9.0	\$0.2149	100.0	+\$0.0580	+27.0
1890	4	66.7	-1	-25.0	60.00	101.1	-6.00	-10.0	.2150	100.0	-.0079	-3.7
1891	4	66.7	-1	-25.0	60.00	101.1	-6.00	-10.0	.2188	101.8	-.0541	-25.7
1892	6	100.0	-3	-50.0	60.00	101.1	-6.00	-10.0	.2001	93.1	-.0728	-34.4
1893	6	100.0	-3	-50.0	60.00	101.1	-6.00	-10.0	.2110	98.2	-.0619	-28.8
1894	6	100.0	-3	-50.0	60.00	101.1	-6.00	-10.0	.1928	89.7	-.0801	-37.5
1895	8	133.3	-5	-62.5	59.25	99.9	-5.25	-8.9	.2293	106.7	-.0436	-20.3
1896	7	116.7	-4	-57.1	59.11	99.7	-5.14	-8.7	.2214	103.0	-.0515	-23.9
1897	7	116.7	-4	-57.1	58.29	98.2	-4.29	-7.4	.2158	100.4	-.0571	-26.5
1898	7	116.7	-4	-57.1	58.29	98.2	-4.29	-7.4	.2201	102.4	-.0528	-24.5
1899	7	116.7	-4	-57.1	58.29	98.2	-4.29	-7.4	.2246	104.5	-.0482	-22.9
1900	5	83.3	-2	-10.0	54.00	91.6	.....	.....	.2584	120.2	-.0145	-7.0
1901	4	66.7	-1	-25.0	54.00	91.6	.....	.....	.2386	111.0	-.0343	-15.9
1902	8	133.3	-5	-62.5	54.00	91.6	.....	.....	.2327	108.3	-.0402	-18.7
1903	3	50.0	.....	.....	54.00	91.6	.....	.....	.2729	127.0	.....	.....

JOINTERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	7	100.0	-2	-28.6	59.33	100.0	-5.33	-9.0	\$0.1791	100.0	+\$0.1268	+70.8
1890	4	57.1	-5	-125.0	60.00	101.1	-6.00	-10.0	.1815	101.3	-.1244	-69.5
1891	5	71.4	-4	-80.0	60.00	101.1	-6.00	-10.0	.1945	108.6	-.1114	-62.3
1892	10	142.9	-1	-10.0	60.00	101.1	-6.00	-10.0	.1856	103.6	-.1203	-67.8
1893	7	100.0	-2	-28.6	60.00	101.1	-6.00	-10.0	.1616	90.2	-.1443	-80.7
1894	11	157.1	-2	-18.2	60.00	101.1	-6.00	-10.0	.1718	95.9	-.1341	-75.1
1895	8	114.3	-1	-12.5	58.50	98.6	-4.50	-7.7	.1699	93.2	-.1330	-81.3
1896	10	142.9	-1	-10.0	58.50	99.1	-4.50	-7.7	.1633	92.5	-.1406	-84.1
1897	7	100.0	-2	-28.6	59.11	99.6	-5.14	-8.7	.1767	98.7	-.1292	-73.1
1898	5	71.4	-4	-80.0	58.50	99.1	-4.50	-7.7	.1896	111.4	-.1063	-59.3
1899	7	100.0	-2	-28.6	58.29	98.2	-4.29	-7.4	.1871	104.5	-.1188	-67.0
1900	8	114.3	-1	-12.5	54.00	91.0	.....	.....	.1807	100.9	-.1252	-69.3
1901	6	85.7	-3	-50.0	54.00	91.0	.....	.....	.2002	136.4	-.0257	+9.2
1902	10	142.9	-1	-10.0	54.00	91.0	.....	.....	.2418	186.9	-.0289	+8.6
1903	9	128.6	.....	.....	54.00	91.0	.....	.....	.2009	170.8	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

COOPERAGE—Continued.

LEVELERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	7	100.0	+	+ 14.3	59.28	100.0	-5.28	- 8.9	\$0.2538	100.0	+\$0.0030	+ 1.2
1890.	7	100.0	+	+ 14.3	60.00	101.2	-6.00	-10.0	.2317	91.3	+.0251	+10.8
1891.	7	100.0	+	+ 14.3	60.00	101.2	-6.00	-10.0	.2286	90.1	+.0282	+12.3
1892.	5	71.4	+	+ 60.0	60.00	101.2	-6.00	-10.0	.2290	90.2	+.0278	+12.1
1893.	4	57.1	+	+100.0	60.00	101.2	-6.00	-10.0	.2143	84.4	+.0425	+19.8
1894.	6	85.7	+	+ 33.3	60.00	101.2	-6.00	-10.0	.2172	85.6	+.0396	+18.2
1895.	9	128.6	-	- 11.1	58.67	99.0	-4.67	- 8.0	.2916	114.9	-.0348	-11.9
1896.	9	128.6	-	- 11.1	58.67	99.0	-4.67	- 8.0	.2953	116.4	-.0285	-13.0
1897.	8	114.3	.....	.....	58.50	98.7	-4.50	- 7.7	.2962	116.7	-.0394	-13.3
1898.	11	157.1	-	- 27.3	58.91	99.4	-4.91	- 8.3	.2672	105.3	-.0104	- 3.9
1899.	6	85.7	+	+ 33.3	58.00	97.8	-1.00	- 6.9	.2669	105.2	-.0101	- 3.8
1900.	6	85.7	+	+ 33.3	54.00	91.1	.....	.....	.2651	104.5	-.0063	- 3.1
1901.	9	128.6	-	- 11.1	54.00	91.1	.....	.....	.2373	93.5	+.0195	+ 8.2
1902.	8	114.3	.....	.....	54.00	91.1	.....	.....	.2275	89.6	+.0293	+12.9
1903.	8	114.3	.....	.....	54.00	91.1	.....	.....	.2568	101.2	.....	.....

RAISERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0	.....	.....	59.60	100.0	-5.60	- 9.4	\$0.2196	100.0	-\$0.0072	- 2.9
1890.	3	50.0	+	+100.0	60.00	100.7	-6.00	-10.0	.2422	97.0	+.0002	+ .1
1891.	4	66.7	+	+ 50.0	60.00	100.7	-6.00	-10.0	.2390	95.8	+.0034	+ 1.4
1892.	3	50.0	+	+100.0	60.00	100.7	-6.00	-10.0	.2036	81.6	+.0388	+19.1
1893.	4	66.7	+	+ 50.0	60.00	100.7	-6.00	-10.0	.2462	98.6	-.0038	- 1.5
1894.	5	83.3	+	+ 20.0	60.00	100.7	-6.00	-10.0	.2159	86.5	+.0265	+12.3
1895.	8	133.3	-	- 25.0	59.25	99.4	-5.25	- 8.9	.2980	119.4	-.0556	-18.7
1896.	7	116.7	-	- 14.3	59.14	99.2	-5.14	- 8.7	.2603	104.4	-.0181	- 6.9
1897.	8	133.3	-	- 25.0	59.25	99.4	-5.25	- 8.9	.2743	109.9	-.0319	- 11.6
1898.	7	116.7	-	- 14.3	59.14	99.2	-5.14	- 8.7	.2741	109.8	-.0317	- 11.6
1899.	8	133.3	-	- 25.0	59.25	99.4	-5.25	- 8.9	.2423	97.1	+.0001	+ .04
1900.	5	83.3	+	+ 20.0	54.00	90.6	.....	.....	.3078	123.3	-.0654	-21.2
1901.	5	83.3	+	+ 20.0	54.00	90.6	.....	.....	.2457	98.4	-.0033	- 1.3
1902.	6	100.0	.....	.....	54.00	90.6	.....	.....	.2738	109.7	-.0314	-11.5
1903.	6	100.0	.....	.....	54.00	90.6	.....	.....	.2424	97.1	.....	.....

TRUSSERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	9	100.0	-	-11.1	58.68	100.0	-4.68	- 8.0	\$0.1995	100.0	+\$0.1485	+ 74.3
1890.	9	100.0	-	-11.1	60.00	102.2	-6.00	-10.0	.1761	88.3	+.1717	+ 97.5
1891.	9	100.0	-	-11.1	60.00	102.2	-6.00	-10.0	.1685	84.5	+.1793	+106.4
1892.	7	77.8	+	+14.3	60.00	102.2	-6.00	-10.0	.1675	84.0	+.1803	+107.6
1893.	12	133.3	-	-33.3	60.00	102.2	-6.00	-10.0	.1877	94.1	+.1601	+ 85.3
1894.	6	66.7	+	+60.0	60.00	102.2	-6.00	-10.0	.1728	90.1	+.1680	+ 83.4
1895.	12	133.3	-	-33.3	58.00	98.8	-4.00	- 6.9	.2496	125.1	-.0682	-39.3
1896.	12	133.3	-	-33.3	57.50	98.0	-3.50	- 6.1	.2170	108.8	-.1308	-69.3
1897.	9	100.0	-	- 11.1	58.00	98.8	-4.00	- 6.9	.2419	121.3	+.1059	+ 53.8
1898.	9	100.0	-	- 11.1	57.33	97.7	-3.33	- 5.8	.2193	109.9	+.1285	+ 68.6
1899.	9	100.0	-	- 11.1	56.00	95.4	-2.00	- 3.6	.1871	95.8	+.1607	+ 85.9
1900.	10	111.1	-	-20.0	54.00	92.0	.....	.....	.2421	121.1	+.1057	+ 53.7
1901.	11	122.2	-	-27.3	54.00	92.0	.....	.....	.1935	97.0	+.1545	+ 79.7
1902.	15	166.7	-	-46.7	54.00	92.0	.....	.....	.2683	134.5	-.0709	-29.6
1903.	8	88.9	.....	.....	54.00	92.0	.....	.....	.3478	171.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

COOPERAGE—Concluded.

TURNERS, Male.

[Data from 2 establishments.]

Year.	Employees.			Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
						Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	7	100.0		58.68	100.0	-4.68	-8.0	\$0.1800	100.0	\$0.043	100.0
1890.	5	71.4	2 - 40.0	60.00	102.2	-6.00	-10.0	.1682	93.4	.0621	72.2
1891.	7	109.0		60.00	102.2	-6.00	-10.0	.1698	94.1	.0630	73.4
1892.	5	71.4	2 - 40.0	60.00	102.2	-6.00	-10.0	.1814	102.4	.0629	72.1
1893.	6	85.7	1 + 16.7	60.00	102.2	-6.00	-10.0	.1776	98.7	.0567	70.2
1894.	5	71.4	2 - 40.0	60.00	102.2	-6.00	-10.0	.1627	90.1	.0756	34.0
1895.	10	142.9	3 + 30.0	57.60	98.2	3.60	+6.3	.1884	104.7	.0459	70.2
1896.	9	128.6	2 + 22.2	58.00	98.8	1.00	+6.9	.1854	103.0	.0489	72.2
1897.	9	128.6	2 + 22.2	57.33	97.7	3.33	+5.8	.1810	102.2	.0460	70.2
1898.	10	142.9	3 + 30.0	57.60	98.2	3.60	+6.3	.1977	109.8	.0596	70.2
1899.	8	114.3	1 + 12.5	56.25	95.9	2.25	+4.0	.1819	101.1	.0521	60.2
1900.	7	100.0		54.00	92.0			.1982	110.7	.0551	70.2
1901.	6	85.7	1 + 16.7	54.00	92.0			.2007	111.5	.0529	70.2
1902.	7	100.0		54.00	92.0			.2399	133.3	.0506	70.2
1903.	7	100.0		54.00	92.0			.2313	128.2		

COTTON GOODS.

CARDING-MACHINE TENDERS, Male.

[Data for employees from 21 establishments for entire period. Data for hours and wages from 2 establishments, 1890, 22 establishments, 1891, 23 establishments, 1892-1903.]

Av. 1890-99.	215	100.0		31	144.4	62.34	100.0	0.15	100.0	\$0.081	100.0
1890.	186	86.5	66 - 32.0	31.77	100.7			.1586	98.0	.0629	77.2
1891.	204	94.9	42 - 20.0	31.08	101.1			.1606	99.5	.0628	77.2
1892.	219	101.9	27 - 12.3	31.08	101.2			.1606	99.5	.0628	77.2
1893.	176	81.9	39 - 18.6	31.08	101.2			.1606	99.5	.0628	77.2
1894.	176	81.9	39 - 18.6	31.08	101.2			.1606	99.5	.0628	77.2
1895.	176	81.9	39 - 18.6	31.08	101.2			.1606	99.5	.0628	77.2
1896.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1897.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1898.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1899.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1900.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1901.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1902.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2
1903.	221	102.8	33 - 15.5	31.31	101.0			.1628	101.4	.0628	77.2

DYERS, Male.

[Data for entire period from 21 establishments for entire period. Data for hours and wages from 2 establishments, 1890, 22 establishments, 1891, 23 establishments, 1892-1903.]

Av. 1890-99.	64	100.0		38.00	100.0	0.78	100.0	\$0.067	100.0	\$0.084	100.0
1890.	64	100.0		38.00	100.0			.1156	106.3	.0614	72.2
1891.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1892.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1893.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1894.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1895.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1896.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1897.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1898.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1899.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1900.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1901.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1902.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2
1903.	64	100.0		38.00	100.0			.1176	107.2	.0614	72.2

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

COTTON GOODS—Continued.

LOOM FIXERS, Male.

[Data for employees from 22 establishments for entire period. Data for hours and wages from 22 establishments, 1890; 23 establishments, 1891; 24 establishments, 1892-1903.]

Year.	Num-ber.	Employees.			Hours per week.				Wages per hour.			
		Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	318	100.0	+ 94	+29.6	60.99	100.0	-0.14	-0.2	\$0.1646	100.0	\$.0187	+11.4
1890	285	89.6	+127	+41.6	61.26	100.4	-.41	-.7	1689	102.6	+.0144	+ 8.5
1891	294	92.5	+118	+40.1	61.58	101.0	-.73	-1.2	1653	100.4	+.0180	+10.9
1892	310	97.5	+102	+32.9	61.50	100.8	-.65	-1.1	1665	101.2	+.0168	+10.1
1893	303	95.3	+109	+36.0	60.91	99.9	-.06	-.1	1710	103.9	+.0123	+ 7.2
1894	314	98.7	+ 98	+31.2	59.41	97.4	-1.44	-2.4	1633	99.2	+.0200	+12.2
1895	325	102.2	+ 87	+28.8	60.77	99.6	+.08	+1	1613	98.0	+.0220	+13.6
1896	317	99.7	+ 95	+30.0	60.50	99.9	-.06	-.1	1655	100.5	+.0178	+10.8
1897	345	108.5	+ 67	+19.4	60.64	99.8	+.31	+5	1645	99.9	+.0488	+11.4
1898	353	111.0	+ 59	+16.7	61.42	100.7	-.57	-.9	1606	97.6	+.0227	+14.1
1899	336	105.7	+ 76	+22.6	61.56	100.9	-.71	-1.2	1587	96.4	+.0246	+15.5
1900	358	112.6	+ 54	+15.1	61.38	100.6	-.53	-.9	1740	105.7	+.0093	+ 5.3
1901	372	117.0	+ 40	+10.8	61.31	100.5	-.46	-.8	1741	105.8	+.0092	+ 5.3
1902	397	124.8	+ 15	+ 3.8	60.83	99.7	+.02	+ .03	1815	110.3	+.0078	+ 1.0
1903	412	129.6			60.85	99.8			1833	111.4		

SPINNERS, FRAME, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 8 establishments, 1890; 1897; 9 establishments, 1891, 1893, 1898, 1901; 10 establishments, 1894, 1896, 1899, 1903; 11 establishments, 1892, 1895, 1900, 1902.]

Av. 1890-99.	72	100.0	-10	-13.9	62.53	100.0	-2.22	-3.6	\$0.0467	100.0	+\$0.0401	+ 85.9
1890	26	36.1	+36	+138.5	60.84	97.3	-.53	-.9	.0521	111.6	+.0347	+ 68.6
1891	73	101.4	11	+15.1	62.83	100.5	-2.52	-4.0	.0419	89.7	+.0449	+107.2
1892	60	83.3	+ 2	+ 3.3	64.00	102.4	-3.69	-5.8	.0428	91.6	+.0440	+102.8
1893	73	101.4	11	+15.1	62.68	100.2	-2.37	-3.8	.0420	89.9	+.0448	+106.7
1894	52	72.2	+10	+19.2	62.76	100.4	-2.45	-3.9	.0400	85.7	+.0466	+117.0
1895	51	70.8	11	+21.6	63.07	100.9	-2.76	-4.4	.0426	91.2	+.0442	+103.8
1896	69	95.8	- 7	-10.1	61.48	98.3	-1.17	-1.9	.0593	127.0	+.0275	+ 46.4
1897	87	120.8	25	+28.7	62.05	99.2	-1.74	-2.8	.0510	109.2	+.0358	+ 70.2
1898	113	156.9	-51	-45.1	62.83	100.5	-2.52	-4.0	.0462	98.9	+.0406	+ 87.9
1899	116	161.1	-54	-46.6	62.71	100.3	-2.40	-3.8	.0494	105.8	+.0374	+ 75.7
1900	125	173.6	63	+50.4	62.56	100.0	-2.25	-3.6	.0600	124.5	+.0284	+ 44.7
1901	86	119.4	-24	-27.9	61.93	99.0	-1.62	-2.6	.0634	135.8	+.0231	+ 36.9
1902	121	168.1	-59	-48.8	61.29	98.0	-.98	-1.6	.0686	147.3	+.0180	+ 26.2
1903	62	86.1	.....	.....	60.31	96.4	.....	.....	.0808	185.9	.....	.....

SPINNERS, FRAME, Female.

[Data for employees from 20 establishments for entire period. Data for hours and wages from 20 establishments, 1890; 21 establishments, 1891; 22 establishments, 1892-1903.]

Av. 1890-99.	1,328	100.0	+267	+20.0	61.69	100.0	0.67	-1.1	\$0.0656	100.0	\$0.0153	+23.3
1890	1,188	88.8	+417	+35.1	61.71	100.2	-.78	-1.3	.0633	99.5	+.0156	+24.9
1891	1,187	88.7	+418	+35.2	62.20	101.0	1.27	2.0	.0650	99.1	+.0159	+25.1
1892	1,236	92.4	+369	+29.9	62.55	101.5	1.62	2.6	.0623	95.0	+.0196	+29.1
1893	1,257	93.9	+348	+27.7	61.81	100.3	-.98	-1.4	.0610	101.8	+.0111	+21.9
1894	1,276	95.4	+329	+25.8	60.41	98.1	1.49	+1.8	.0640	97.6	+.0169	+26.4
1895	1,263	94.4	+342	+27.1	61.57	100.0	-.61	-1.0	.0651	99.2	+.0158	+24.3
1896	1,288	97.0	+307	+23.7	61.37	99.6	-.44	-.7	.0708	107.9	+.0101	+14.3
1897	1,181	100.9	+121	+8.2	60.87	98.8	-.06	-.1	.0681	103.8	+.0128	+14.8
1898	1,604	119.9	+ 1	+ .1	61.69	100.1	-.76	-1.2	.0638	97.3	+.0171	+26.8
1899	1,584	118.4	- 21	-1.8	61.75	100.2	-.82	-1.3	.0619	98.9	+.0160	+24.7
1900	1,442	107.8	+163	+11.3	61.66	100.1	-.73	-1.2	.0711	108.4	+.0098	+13.8
1901	1,541	115.2	+ 64	+4.2	61.32	99.5	-.39	-.6	.0731	111.4	+.0078	+10.7
1902	1,179	110.5	+126	+8.9	61.13	99.2	-.20	-.3	.0766	116.8	+.0043	+ 5.6
1903	1,605	120.0	.....	.....	60.93	98.9	.....	.....	.0809	123.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

COTTON GOODS—Concluded.

SPINNERS, MULE, Male.

[Data from 11 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	216	100.0	-33	-15.7	59.43	100.0	-0.58	-1.0	\$0.1856	100.0	\$0.0283	100.0
1890	220	101.8	-43	-19.9	60.00	101.0	-1.15	-1.9	.1696	91.4	.0443	-87
1891	223	103.2	-46	-20.6	60.00	101.0	-1.15	-1.9	.1730	93.2	.0409	-91
1892	194	92.4	17	+8.8	60.00	101.0	-1.15	-1.9	.2055	110.7	.0484	-47
1893	199	91.8	22	+11.1	59.23	99.7	-28	-6	.2119	114.2	.0520	-49
1894	236	112.4	-59	-25.0	59.06	99.4	-21	-4	.1766	96.2	.0350	-49
1895	216	102.9	-39	-18.1	59.27	99.7	-42	-7	.1815	97.8	.0324	-52
1896	207	98.6	-30	-14.3	58.95	99.2	-10	-2	.1847	99.5	.0292	-54
1897	200	95.2	-23	-11.5	59.24	99.7	-39	-7	.1888	102.3	.0241	-57
1898	209	99.5	-32	-15.3	59.28	99.7	-43	-7	.1822	98.2	.0317	-54
1899	191	91.0	-14	-7.3	59.23	99.7	-38	-6	.1789	96.4	.0340	-56
1900	201	95.7	-24	-11.9	59.28	99.7	-43	-7	.2042	110.0	.0697	-48
1901	207	98.6	-30	-14.3	59.26	99.7	-41	-7	.2042	110.0	.0697	-48
1902	187	89.0	-10	-5.3	58.79	98.9	.06	+1	.2163	116.5	.0624	-44
1903	177	81.3			58.85	99.0			.2139	115.2		

WEAVERS, Male.

[Data for employees from 13 establishments for entire period. Data for hours and wages from 12 establishments, 1890; 13 establishments, 1891-1893, 1897, 1903; 20 establishments, 1892, 1894-99, 1898-1902.]

Av. 1890-99.	1,333	100.0	-229	-17.2	61.61	100.0	0.70	-1.1	\$0.1145	100.0	\$0.0299	100.0
1890	1,070	80.3	-392	-46.0	61.11	99.2	.20	-3	.1300	113.5	.0454	-42
1891	1,072	80.4	-400	-45.7	62.00	100.6	-1.09	-1.8	.1190	103.1	.0174	-157
1892	1,127	84.5	-435	-38.6	62.56	101.5	-1.65	-2.6	.1133	99.0	.0221	-57
1893	1,209	98.2	-253	-19.3	61.29	99.5	.38	-6	.1232	107.6	.0211	-57
1894	1,296	95.0	-266	-23.1	61.02	99.0	.11	-2	.1129	98.6	.0225	-54
1895	1,267	98.0	-255	-19.5	61.41	99.7	.53	-9	.1106	96.6	.0225	-54
1896	1,336	100.2	-226	-16.9	61.15	99.3	.24	-4	.1178	102.9	.0176	-149
1897	1,291	117.1	-1	-0.1	61.76	100.1	.79	-1.3	.1091	95.3	.0263	-44
1898	1,609	120.7	-47	-2.9	61.89	100.5	.98	-1.6	.1048	91.5	.0306	-52
1899	1,072	120.4	-110	-6.6	61.89	100.5	.98	-1.6	.1055	92.1	.0306	-52
1900	1,557	125.4	-95	-5.7	61.64	100.0	.70	-1.2	.1203	105.1	.0151	-77
1901	1,550	116.3	-112	-6.8	61.76	100.2	.85	-1.4	.1193	104.2	.0161	-74
1902	1,617	121.3	-55	-3.4	61.28	99.5	.37	-6	.1267	110.7	.0087	-99
1903	1,562	117.2			60.91	98.9			.1354	118.3		

WEAVERS, Female.

[Data for employees from 19 establishments for entire period. Data for hours and wages from 19 establishments, 1890; 20 establishments, 1891; 21 establishments, 1892-1903.]

Av. 1890-99.	3,564	100.0	-17	-1.2	60.27	100.0	-0.26	-0.4	\$0.1106	100.0	\$0.0158	100.0
1890	3,439	98.7	-32	-1.1	60.56	101.1	.19	-1.6	.1096	99.1	.0168	-57
1891	3,635	103.7	-58	-1.6	61.20	101.5	-1.19	-1.9	.1090	98.6	.0174	-56
1892	3,660	103.6	-69	-1.9	61.74	101.8	-1.33	-2.2	.1103	99.7	.0171	-54
1893	3,555	101.5	-48	-1.3	60.42	100.2	.41	-7	.1162	105.2	.0101	-87
1894	3,598	102.7	-51	-1.4	58.24	96.6	-1.77	-3.0	.1102	99.6	.0162	-54
1895	3,587	102.4	-52	-1.4	60.14	99.8	.13	-2	.1090	98.6	.0174	-56
1896	3,491	99.6	-44	-1.2	60.04	99.6	.10	-1.0	.1145	103.5	.0119	-104
1897	3,407	97.2	-310	-19.0	59.41	98.6	.69	-1.0	.1115	100.8	.0149	-114
1898	3,421	97.6	-334	-19.3	60.46	100.3	.15	-7	.1088	98.4	.0176	-62
1899	3,325	94.9	-268	-7.8	60.46	100.3	.15	-7	.1071	96.8	.0193	-180
1900	3,401	97.1	-344	-9.8	60.33	100.1	.32	-5	.1214	109.8	.0050	-44
1901	3,213	91.7	-146	-4.5	60.18	99.9	.17	-3	.1212	109.6	.0052	-43
1902	3,259	93.0	-192	-5.9	60.60	99.6	.10	-102	.1241	112.2	.0023	-99
1903	3,067	87.5			60.01	99.6			.1294	114.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

DYEING, FINISHING, AND PRINTING TEXTILES.

BLEACHERS, Male.

[Data from 6 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	108	100.0	+ 92	+ 85.2	59.19	100.0	-0.13	-0.2	\$0.1155	100.0	+\$0.0048	+ 4.2
1890	86	79.6	+114	+132.6	60.00	101.4	-.94	-1.6	.1153	99.8	+.0050	+ 4.3
1891	88	81.5	+112	+127.3	60.00	101.4	-.94	-1.6	.1093	94.6	+.0110	+10.1
1892	104	96.3	+ 96	+ 92.3	59.60	100.7	-.54	-.9	.1129	97.7	+.0074	+ 6.6
1893	116	107.4	+ 84	+ 72.4	58.98	99.6	+ .08	+ .1	.1151	99.7	+.0052	+ 4.5
1894	103	95.4	+ 97	+ 94.2	58.76	99.3	+ .30	+ .5	.1146	99.2	+.0057	+ 5.0
1895	114	105.6	+ 86	+ 75.4	58.98	99.6	+ .08	+ .1	.1157	100.2	+.0046	+ 4.0
1896	108	100.0	+ 92	+ 85.2	58.94	99.6	+ .12	+ .2	.1184	102.5	+.0019	+ 1.6
1897	122	113.0	+ 78	+ 63.9	58.61	99.0	+ .45	+ .8	.1174	101.6	+.0029	+ 2.5
1898	110	101.9	+ 90	+ 81.8	59.00	99.7	+ .06	+ .1	.1186	102.7	+.0017	+ 1.4
1899	125	115.7	+ 75	+ 60.0	59.06	99.8	.....	.....	.1175	101.7	+.0028	+ 2.4
1900	132	122.2	+ 68	+ 51.5	59.08	99.8	-.02	-.03	.1189	102.9	+.0014	+ 1.2
1901	150	138.9	+ 50	+ 33.3	58.89	99.5	+ .17	+ .3	.1180	102.2	+.0023	+ 1.9
1902	172	159.3	+ 28	+ 16.3	58.91	99.5	+ .15	+ .3	.1193	103.3	+.0010	+ .8
1903	209	185.2	.....	.....	59.06	99.8	.....	.....	.1203	104.2	.....	.....

CALENDERS, Male.

[Data from 8 establishments.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	82	100.0	+39	59.51	100.0	+0.10	+0.2	\$0.1318	100.0
1890	77	93.9	+44	57.1	101.0	-.47	-.8	.1302	98.8
1891	81	98.8	+40	59.4	100.9	-.46	-.8	.1309	99.3
1892	84	102.4	+37	59.80	100.5	-.19	-.3	.1319	100.1
1893	82	100.0	+39	59.41	99.8	+ .20	+ .3	.1336	101.4
1894	76	92.7	+45	58.79	99.8	+ .82	+1.4	.1312	99.5
1895	78	95.1	+43	59.41	99.8	+ .20	+ .3	.1302	98.8
1896	76	92.7	+45	59.45	99.9	-.16	+ .3	.1322	100.3
1897	81	102.4	+37	59.02	99.2	+ .59	+1.0	.1330	100.9
1898	87	106.1	+31	59.51	100.0	+ .10	+ .2	.1332	101.1
1899	96	117.1	+25	59.51	100.0	+ .10	+ .2	.1318	100.0
1900	101	123.2	+20	59.54	100.1	+ .07	+ .1	.1358	103.0
1901	104	126.8	+17	59.59	100.1	+ .02	+ .03	.1372	104.1
1902	109	132.9	+12	59.61	100.2	.....	.....	.1390	105.5
1903	121	147.6	.....	59.61	100.2	.....	.....	.1397	106.0

COLOR MIXERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages, from 3 establishments, 1890, 1891, 4 establishments, 1892-1903.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	71	100.0	+ 9	58.55	100.0	-0.55	-0.9	\$0.1213	100.0
1890	75	105.6	+ 5	6.7	60.00	-2.00	-3.3	.1180	97.3
1891	71	100.0	+ 9	12.7	60.00	-2.00	-3.3	.1198	98.8
1892	68	95.8	+12	17.6	59.46	-1.46	-2.5	.1215	100.2
1893	69	97.2	+11	15.9	58.00	.....	.....	.1232	101.6
1894	66	93.0	+14	21.2	58.00	.....	.....	.1182	97.4
1895	72	101.4	+ 8	11.1	58.00	.....	.....	.1217	100.3
1896	75	105.6	+ 5	6.7	58.00	.....	.....	.1225	101.0
1897	77	108.5	+ 3	3.9	58.00	.....	.....	.1220	100.6
1898	67	94.4	+13	19.4	58.00	.....	.....	.1237	102.0
1899	71	100.2	+ 6	8.1	58.00	.....	.....	.1220	100.6
1900	67	94.4	+13	19.4	58.00	.....	.....	.1275	105.1
1901	75	105.6	+ 5	6.7	58.00	.....	.....	.1258	103.7
1902	82	115.5	- 2	- 2.4	58.00	.....	.....	.1263	104.1
1903	80	112.7	.....	.....	58.00	.....	.....	.1285	105.9

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

ELECTRICAL APPARATUS AND SUPPLIES—Concluded.

PATTERN MAKERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	4	100.0	+6	+150.0	59.00	100.0	-4.00	-6.8	\$0.3191	100.0	+\$0.0519	+16.3
1890	2	50.0	+8	+400.0	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1891	2	50.0	+8	+400.0	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1892	2	50.0	+8	+400.0	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1893	3	75.0	+7	+233.3	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1894	3	75.0	+7	+233.3	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1895	4	100.0	+6	+150.0	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1896	5	125.0	+5	+100.0	59.00	100.0	-4.00	-6.8	.3000	94.0	+ .0710	+23.7
1897	5	125.0	+5	+100.0	59.00	100.0	-4.00	-6.8	.3500	109.7	+ .0210	+6.0
1898	5	125.0	+5	+100.0	59.00	100.0	-4.00	-6.8	.3700	116.0	+ .0010	+0.3
1899	7	175.0	+3	+42.9	59.00	100.0	-4.00	-6.8	.3714	116.4	- .0004	-1.1
1900	10	250.0	.....	.....	59.00	100.0	-4.00	-6.8	.3170	99.3	+ .0540	+17.9
1901	10	250.0	.....	.....	55.00	93.2	.....	.....	.3350	106.0	+ .0360	+10.7
1902	9	225.0	+1	+11.1	55.00	93.2	.....	.....	.3422	107.2	+ .0288	+9.4
1903	10	250.0	.....	.....	55.00	93.2	.....	.....	.3710	116.3	.....	.....

FLOUR.

BOLTERS, Male.

[Data from 11 establishments.]

Av. 1890-99.	23	100.0	+2	+8.7	70.18	100.0	+0.14	+0.2	\$0.1657	100.0	+\$0.0107	+6.5
1890	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1672	100.9	+ .0092	+5.5
1891	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1672	100.9	+ .0092	+5.5
1892	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1680	101.4	+ .0084	+5.0
1893	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1680	101.4	+ .0084	+5.0
1894	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1651	99.6	+ .0113	+6.8
1895	22	95.7	+3	+13.6	70.09	99.9	+ .23	+ .8	.1663	100.4	+ .0101	+6.1
1896	21	104.3	+1	+4.2	70.25	100.1	+ .07	+ .1	.1637	98.8	+ .0127	+7.8
1897	25	108.7	.....	.....	70.32	100.2	.....	.....	.1635	98.7	+ .0129	+7.9
1898	25	108.7	.....	.....	70.32	100.2	.....	.....	.1641	99.0	+ .0123	+7.3
1899	25	108.7	.....	.....	70.32	100.2	.....	.....	.1641	99.0	+ .0123	+7.3
1900	25	108.7	.....	.....	70.32	100.2	.....	.....	.1670	100.8	+ .0094	+5.6
1901	25	108.7	.....	.....	70.32	100.2	.....	.....	.1718	103.7	+ .0046	+2.7
1902	25	108.7	.....	.....	70.32	100.2	.....	.....	.1766	106.6	+ .0092	+5.1
1903	25	108.7	.....	.....	70.32	100.2	.....	.....	.1761	106.5	.....	.....

LABORERS, Male.

[Data from 7 establishments.]

Av. 1890-99.	176	100.0	+55	+31.3	62.11	100.0	-1.90	-3.1	\$0.1512	100.0	+\$0.0272	+18.0
1890	113	81.3	+88	+61.5	62.13	100.5	-2.22	-3.6	.1467	97.0	+ .0317	+21.5
1891	115	82.4	+86	+59.3	62.10	100.3	-2.19	-3.5	.1471	97.3	+ .0313	+21.3
1892	116	83.0	+85	+58.2	62.08	100.4	-2.17	-3.5	.1472	97.4	+ .0312	+21.2
1893	119	84.7	+82	+55.0	62.34	100.4	-2.13	-3.4	.1479	97.8	+ .0305	+20.8
1894	118	84.1	+83	+56.1	62.35	100.4	-2.14	-3.4	.1479	97.8	+ .0305	+20.8
1895	155	88.1	-76	-49.0	62.25	100.2	-2.07	-3.3	.1499	99.1	+ .0285	+19.0
1896	209	118.8	-22	-10.5	61.78	99.5	-1.57	-2.5	.1559	103.1	+ .0225	+14.4
1897	210	119.3	-21	-10.0	61.77	99.5	-1.56	-2.5	.1558	103.0	+ .0226	+14.5
1898	227	129.0	-4	-1.8	61.69	99.3	-1.48	-2.4	.1570	103.8	+ .0214	+13.6
1899	224	127.3	-7	-3.1	61.71	99.4	-1.50	-2.4	.1565	103.5	+ .0219	+14.0
1900	225	127.8	-6	-2.7	61.71	99.4	-1.50	-2.4	.1571	103.9	+ .0213	+13.6
1901	236	134.1	-5	-2.1	61.12	98.4	-.91	-1.5	.1741	115.1	+ .0043	+2.5
1902	236	134.1	-5	-2.1	60.20	96.9	+ .01	+ .02	.1778	117.6	+ .0006	+0.3
1903	231	131.3	.....	.....	60.21	96.9	.....	.....	.1784	118.0	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FLOUR—Concluded.

MILLERS, Male.

[Data from 33 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	173	100.0	+33	+19.1	65.90	100.0	-4.59	-7.0	\$0.2506	100.0	+\$0.0268	+10.7
1890	160	92.5	+46	+28.8	65.70	99.7	-4.39	-6.7	.2517	100.4	+.0257	+10.2
1891	160	92.5	+46	+28.8	65.70	99.7	-4.39	-6.7	.2521	100.6	+.0253	+10.0
1892	164	94.8	+42	+25.6	65.85	99.9	-4.54	-6.9	.2514	100.3	+.0260	+10.3
1893	164	94.8	+42	+25.6	65.82	99.9	-4.51	-6.9	.2516	100.4	+.0258	+10.3
1894	167	96.5	+39	+23.4	65.93	100.0	-4.62	-7.0	.2503	99.9	+.0271	+10.8
1895	167	96.5	+39	+23.4	65.93	100.0	-4.62	-7.0	.2510	100.2	+.0264	+10.5
1896	184	106.4	+22	+12.0	66.07	100.3	-4.76	-7.2	.2490	99.4	+.0284	+11.4
1897	184	106.4	+22	+12.0	66.20	100.5	-4.89	-7.4	.2474	98.7	+.0300	+12.1
1898	189	109.2	+17	+9.0	66.03	100.2	-4.72	-7.1	.2505	100.0	+.0269	+10.7
1899	192	111.0	+14	+7.3	65.78	99.8	-4.47	-6.8	.2511	100.2	+.0263	+10.5
1900	194	112.1	+12	+6.2	65.78	99.8	-4.47	-6.8	.2544	101.5	+.0230	+9.0
1901	193	111.6	+13	+6.7	65.75	99.8	-4.44	-6.8	.2559	102.1	+.0215	+8.4
1902	201	116.2	+5	+2.5	62.84	95.4	-1.53	-2.4	.2701	107.8	+.0073	+2.7
1903	206	119.1			61.31	93.0			.2774	110.7		

MILLWRIGHTS, Male.

[Data from 18 establishments.]

Av. 1890-99.	48	100.0	+2	+4.2	63.15	100.0	+0.21	+0.3	\$0.2583	100.0	+\$0.0160	+6.2
1890	45	93.8	+5	+11.1	63.20	100.1	+ .16	+ .3	.2588	100.2	+.0155	+6.0
1891	42	87.5	+8	+19.0	63.43	100.4	- .07	- .1	.2576	99.7	+.0167	+6.5
1892	45	93.8	+5	+11.1	63.20	100.1	+ .16	+ .3	.2601	100.7	+.0142	+5.5
1893	55	114.6	-5	-9.1	62.62	99.2	+ .74	+1.2	.2633	101.9	+.0110	+4.2
1894	46	95.8	+4	+8.7	63.13	100.0	+ .23	+ .4	.2579	99.8	+.0164	+6.4
1895	44	91.7	+6	+13.6	63.27	100.2	+ .09	+ .1	.2545	98.5	+.0198	+7.8
1896	48	100.0	+2	+4.2	63.00	99.8	+ .36	+ .6	.2539	98.3	+.0201	+8.0
1897	45	93.8	+5	+11.1	63.73	100.9	- .37	- .6	.2547	98.6	+.0198	+7.7
1898	58	120.8	-8	-13.8	62.90	99.6	+ .46	+ .7	.2618	101.4	+.0125	+4.8
1899	55	114.6	-5	-9.1	63.05	99.8	+ .31	+ .5	.2605	100.9	+.0138	+5.3
1900	53	110.4	-3	-5.7	63.17	100.0	+ .19	+ .3	.2657	102.9	+.0086	+3.2
1901	49	102.1	+1	+2.0	63.43	100.4	- .07	- .1	.2675	103.6	+.0068	+2.5
1902	51	106.3	-1	-2.0	63.29	100.2	+ .07	+ .1	.2722	105.4	+.0021	+ .8
1903	50	104.2			63.36	100.3			.2743	106.2		

PACKERS, Male.

[Data from 15 establishments.]

Av. 1890-99.	108	100.0	+61	+56.5	60.17	100.0	-1.20	-2.0	\$0.2107	100.0	+\$0.0307	+14.6
1890	95	88.0	+74	+77.9	60.82	101.1	-1.65	-3.0	.2075	98.5	+.0339	+16.3
1891	95	88.9	+73	+78.0	60.06	99.8	-1.09	-1.8	.2168	102.9	+.0246	+11.3
1892	98	90.7	+71	+72.4	60.43	100.4	-1.46	-2.4	.2141	101.6	+.0273	+12.8
1893	98	90.7	+71	+72.4	60.80	101.0	-1.83	-3.0	.2039	96.8	+.0347	+18.4
1894	99	91.7	+70	+70.7	60.91	101.2	-1.94	-3.2	.2031	96.4	+.0383	+18.9
1895	97	89.8	+72	+74.2	60.80	101.0	-1.63	-3.0	.1982	94.1	+.0432	+21.8
1896	111	102.8	+56	+52.3	60.16	100.0	-1.19	-2.0	.2096	99.5	+.0318	+15.2
1897	116	107.4	+53	+45.7	59.74	99.3	- .77	-1.3	.2140	101.6	+.0274	+12.8
1898	128	118.5	+41	+32.0	59.20	98.4	- .23	- .4	.2181	103.5	+.0233	+10.7
1899	137	126.0	+32	+23.4	58.82	97.8	+ .16	+ .3	.2219	105.3	+.0195	+8.8
1900	145	134.3	+24	+16.6	58.47	97.2	+ .50	+ .9	.2264	107.5	+.0150	+6.6
1901	158	146.3	+11	+7.0	58.67	97.5	+ .30	+ .5	.2396	113.7	+.0019	+ .8
1902	164	151.9	+5	+3.0	58.72	97.6	+ .25	+ .4	.2413	114.5	+.0001	+ .04
1903	169	156.5			58.97	98.0			.2414	114.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FOUNDRY AND MACHINE SHOP.

BLACKSMITHS, Male.

[Data from 166 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	576	100.0	+242	+42.0	59.09	100.0	-2.44	-4.1	\$0.2639	100.0	+\$0.0023	+12.1
1890	573	99.5	+245	+42.8	59.41	100.5	-2.76	-4.6	.2677	101.4	+.0285	+10.5
1891	579	100.5	+239	+41.3	59.20	100.2	-2.55	-4.3	.2681	101.6	+.0281	+10.5
1892	583	101.2	+235	+40.3	59.37	100.5	-2.72	-4.6	.2672	101.3	+.0290	+10.9
1893	586	101.7	+232	+39.6	59.03	99.9	-2.38	-4.0	.2677	101.1	+.0285	+10.6
1894	540	88.5	+308	+53.4	58.68	99.3	-2.05	-3.5	.2611	98.9	+.0351	+13.1
1895	541	93.9	+277	+48.2	59.18	100.2	-2.53	-4.3	.2602	98.6	+.0350	+13.4
1896	548	95.1	+270	+46.3	58.93	99.7	-2.28	-3.9	.2643	100.2	+.0319	+12.1
1897	541	93.9	+277	+48.2	58.96	99.8	-2.31	-3.9	.2604	98.7	+.0358	+13.7
1898	635	110.2	+183	+28.8	59.20	100.2	-2.55	-4.3	.2587	98.0	+.0375	+14.5
1899	665	115.5	+133	+23.0	58.98	99.8	-2.33	-4.0	.2637	99.9	+.0325	+12.5
1900	695	120.7	+123	+17.7	58.87	99.6	-2.22	-3.8	.2685	101.7	+.0277	+10.4
1901	753	130.7	+65	+8.6	57.78	97.8	-1.13	-2.0	.2737	104.5	+.0255	+7.4
1902	802	139.2	+16	+2.0	57.17	96.8	-.52	-.9	.2814	107.8	+.0118	+4.1
1903	818	142.0			56.65	95.9			.2682	112.2		

BOILER MAKERS, Male.

[Data from 97 establishments.]

Av. 1890-99.	1,263	100.0	+593	+47.6	58.55	100.0	-2.31	-3.9	\$0.2600	100.0	+\$0.0229	+2.2
1890	1,236	100.8	+564	+47.2	59.25	101.2	-3.01	-5.1	.2591	99.1	+.0254	+2.8
1891	1,231	102.2	+569	+47.7	59.23	101.2	-2.99	-5.0	.2577	98.8	+.0271	+3.5
1892	1,217	105.1	+575	+48.1	58.88	100.6	-2.64	-4.5	.2585	99.1	+.0262	+3.2
1893	1,280	101.3	+520	+42.8	58.59	99.7	-2.15	-3.7	.2583	99.0	+.0253	+3.0
1894	1,195	87.3	+595	+53.8	58.83	100.5	-2.59	-4.4	.2614	100.2	+.0234	+2.0
1895	1,136	89.9	+644	+56.6	58.47	99.0	-2.25	-3.8	.2629	100.8	+.0219	+1.8
1896	1,156	92.9	+624	+54.5	58.92	99.1	-1.78	-3.1	.2626	100.7	+.0222	+2.3
1897	1,197	94.8	+583	+49.0	58.41	99.2	-1.87	-3.2	.2607	99.9	+.0211	+1.7
1898	1,174	107.2	+560	+48.6	58.56	99.6	-2.06	-3.5	.2617	100.3	+.0211	+1.8
1899	1,152	108.1	+538	+46.5	58.96	99.2	-1.82	-3.1	.2651	101.7	+.0194	+1.5
1900	1,177	116.9	+523	+45.1	57.59	98.0	-1.12	-2.0	.2773	106.5	+.0075	+2.7
1901	1,188	125.8	+515	+43.9	56.87	97.0	-.78	-1.0	.2794	107.1	+.0054	+1.9
1902	1,611	128.6	+56	+4.7	56.77	96.7	-.60	-.7	.2880	107.5	+.0048	+1.7
1903	1,590	124.6			56.21	96.1			.2818	109.2		

BOILER RIVETERS, Male.

[Data from 8 establishments.]

Av. 1890-99.	79	100.0	+39	+49.4	58.08	100.0	+4.17	+7.2	\$0.2268	100.0	+\$0.0229	+2.1
1890	67	84.8	+31	+39.1	59.12	101.5	+3.22	+5.8	.2157	107.9	+.0137	+5.6
1891	101	128.6	+34	+43.8	58.57	100.7	+3.17	+5.8	.2108	92.9	+.0156	+6.6
1892	10	12.7	+39	+49.8	58.74	100.9	+4.15	+7.1	.2161	98.3	+.0147	+5.4
1893	96	125.7	+25	+32.1	58.59	100.8	+3.65	+6.9	.2176	99.1	+.0148	+5.5
1894	78	98.7	+31	+39.1	58.59	100.9	+3.65	+6.9	.2176	99.1	+.0148	+5.5
1895	79	100.0	+39	+49.4	58.08	100.0	+4.17	+7.2	.2268	100.0	+.0229	+2.1
1896	61	77.2	+27	+34.1	57.77	99.3	+3.71	+6.4	.2128	92.6	+.0136	+5.4
1897	71	89.9	+28	+35.4	58.14	99.4	+3.84	+6.7	.2180	98.1	+.0151	+6.1
1898	112	141.8	+27	+34.1	57.99	99.8	+3.72	+6.4	.2180	98.1	+.0151	+6.1
1899	108	137.9	+23	+29.4	58.14	99.6	+3.65	+6.9	.2176	99.1	+.0148	+5.5
1900	133	168.4	+15	+19.2	56.43	97.2	+3.02	+5.0	.2268	100.0	+.0229	+2.1
1901	81	102.5	+52	+65.9	57.16	96.7	+2.45	+4.0	.2379	111.3	+.0092	+2.0
1902	118	149.4			56.91	97.8			.2261	113.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FOUNDRY AND MACHINE SHOP—Continued.

BRASS FINISHERS, Male.

[Data from 20 establishments.]

Year.	Employees.		Hours per week.				Wages per hour.					
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	350	100.0	+151	+42.4	59.07	100.0	-4.18	-7.1	\$0.2419	100.0	+\$0.0289	+11.9
1890.	387	108.7	+120	+31.0	59.03	99.9	-4.14	-7.0	.2437	100.7	+.0271	+11.1
1891.	373	104.8	+134	+35.9	59.02	99.9	-4.13	-7.0	.2473	102.2	+.0235	+9.5
1892.	365	102.5	+142	+38.9	59.14	100.1	-4.25	-7.2	.2452	101.4	+.0256	+10.4
1893.	367	103.1	+140	+38.1	59.18	100.2	-4.29	-7.2	.2417	99.9	+.0291	+12.0
1894.	308	86.5	+199	+56.1	58.92	99.7	-4.03	-6.8	.2446	101.1	+.0262	+10.7
1895.	336	94.4	+171	+50.9	58.92	99.7	-4.03	-6.8	.2411	100.9	+.0267	+10.9
1896.	319	89.6	+188	+58.9	59.03	99.9	-4.14	-7.0	.2419	100.0	+.0289	+11.9
1897.	343	96.3	+164	+47.8	59.06	100.0	-4.17	-7.1	.2371	98.0	+.0337	+14.2
1898.	364	102.2	+143	+39.3	59.19	100.2	-4.30	-7.3	.2358	97.5	+.0350	+14.8
1899.	397	111.5	+110	+27.7	59.16	100.2	-4.27	-7.2	.2376	98.2	+.0332	+14.0
1900.	396	108.4	+121	+31.3	58.21	98.5	-3.32	-5.7	.2467	102.0	+.0341	+9.8
1901.	430	120.8	+77	+17.9	58.24	98.6	-3.35	-5.8	.2518	104.1	+.0190	+7.5
1902.	454	127.5	+53	+11.7	56.18	95.1	-1.29	-2.3	.2552	109.6	+.0056	+2.1
1903.	507	142.4			54.89	92.0			.2708	111.9		

CORK MAKERS, Male.

[Data for employees from 40 establishments for entire period. Data for hours and wages from 40 establishments, 1890-1901; 41 establishments, 1902, 1903.]

Av. 1890-99.	164	100.0	+90	+54.9	59.73	100.0	-2.56	-4.3	\$0.3072	100.0	-\$0.0270	+13.0
1890.	157	95.7	+97	+61.8	59.87	100.2	-2.70	-4.5	.2077	100.2	+.0265	+12.8
1891.	159	97.0	+95	+59.7	59.82	100.2	-2.65	-4.4	.2078	100.3	+.0264	+12.7
1892.	159	97.0	+95	+59.7	59.83	100.2	-2.66	-4.4	.2091	100.9	+.0251	+12.0
1893.	168	102.4	+86	+51.2	59.87	100.2	-2.70	-4.5	.2052	99.0	+.0290	+14.1
1894.	157	95.7	+97	+61.8	59.65	99.9	-2.48	-4.2	.2015	97.2	+.0327	+16.2
1895.	157	95.7	+97	+61.8	59.87	100.2	-2.70	-4.5	.2032	98.1	+.0310	+15.3
1896.	157	95.7	+97	+61.8	59.79	100.1	-2.62	-4.4	.2078	100.3	+.0264	+12.7
1897.	152	92.7	+102	+67.1	59.40	99.4	-2.23	-3.8	.2096	101.2	+.0246	+11.7
1898.	176	107.3	+78	+44.3	59.59	99.8	-2.42	-4.1	.2096	101.2	+.0246	+11.7
1899.	200	122.0	+54	+27.0	59.56	99.7	-2.39	-4.0	.2100	101.4	+.0242	+11.5
1900.	220	134.1	+34	+15.5	59.13	99.5	-2.26	-3.8	.2133	102.9	+.0209	+9.8
1901.	220	134.1	+34	+15.5	58.78	98.4	1.61	2.7	.2217	107.0	+.0125	+5.6
1902.	254	154.9			58.25	97.5	-1.08	-1.9	.2202	106.3	+.0140	+6.4
1903.	254	154.9			57.17	95.7			.2342	113.0		

CORK MAKERS, Female.

[Data from 2 establishments.]

Av. 1890-99.	7	100.0	+6	+85.7	59.66	100.0	+0.11	+0.2	\$0.0912	100.0	-\$0.0027	-3.0
1890.	10	142.9	+3	+30.0	59.80	100.2	-.03	-1.1	.0709	83.3	+.0125	+16.4
1891.	6	85.7	+7	+116.7	59.67	100.0	+0.10	+2.2	.0933	102.3	+.0048	-5.1
1892.	5	71.4	+8	+160.0	59.60	99.9	+0.17	+3.3	.1000	109.6	+.0153	+11.5
1893.	4	57.1	+9	+225.0	59.50	99.7	+0.27	+5.5	.0938	116.6	+.0078	-16.7
1894.	6	85.7	+7	+116.7	59.67	100.0	+0.10	+2.2	.0938	105.0	+.0073	-7.6
1895.	6	85.7	+7	+116.7	59.67	100.0	+0.10	+2.2	.0902	106.5	+.0077	-8.0
1896.	5	71.4	+8	+160.0	59.60	99.9	+0.17	+3.3	.0984	107.9	+.0099	-10.1
1897.	7	100.0	+6	+85.7	59.71	100.1	+0.06	+1.1	.0989	97.5	+.0004	-4
1898.	8	114.3	+5	+62.5	59.75	100.2	+0.02	+0.3	.0881	96.6	+.0001	-5
1899.	12	171.4	+1	+8.3	59.67	100.0	+0.10	+2.2	.0688	75.4	+.0197	+26.6
1900.	11	157.1	+2	+18.2	59.82	100.3	-.05	-1.1	.0909	98.7	+.0076	+9.4
1901.	8	114.3	+5	+62.5	59.75	100.2	+0.02	+0.3	.0856	93.9	+.0029	-3.4
1902.	13	185.7			59.77	100.2			.0789	86.5	+.0096	+12.2
1903.	13	185.7			59.77	100.2			.0885	97.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FOUNDRY AND MACHINE SHOP—Continued.

LABORERS, Male.

[Data from 128 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	3,558	100.0	+1,931	+54.3	59.45	100.0	-2.36	-4.0	\$0.1419	100.0	+\$0.0166	+11.7
1890.	3,651	102.6	+1,838	+50.3	59.63	100.3	-2.54	-4.3	.1413	99.6	-.0172	-12.2
1891.	3,564	100.2	+1,925	+54.0	59.59	100.2	-2.50	-4.2	.1442	101.6	+.0143	+9.9
1892.	3,672	103.2	+1,817	+49.5	59.56	100.2	-2.47	-4.1	.1450	102.2	+.0135	+9.5
1893.	3,502	98.4	+1,987	+56.7	59.50	100.1	-2.41	-4.1	.1443	101.7	+.0142	+9.8
1894.	2,887	81.1	+2,602	+90.1	59.10	99.4	-2.01	-3.4	.1393	98.2	+.0192	+13.4
1895.	3,335	93.7	+2,154	+64.6	59.63	100.1	-2.44	-4.1	.1395	98.3	+.0190	+13.6
1896.	3,480	97.8	+2,009	+57.7	59.42	99.9	-2.33	-3.9	.1414	99.6	+.0171	+12.1
1897.	3,343	94.0	+2,146	+64.2	59.16	99.5	-2.07	-3.5	.1417	99.9	+.0168	+11.9
1898.	3,881	109.1	+1,608	+41.4	59.40	99.9	-2.31	-3.9	.1407	99.2	+.0178	+12.7
1899.	4,263	119.8	+1,226	+28.8	59.60	100.3	-2.51	-4.2	.1418	99.9	+.0167	+11.8
1900.	4,513	126.8	+ 976	+21.6	59.27	99.7	-2.18	-3.7	.1458	102.7	+.0127	+8.7
1901.	4,825	135.6	+ 664	+13.8	58.10	97.7	-1.01	-1.7	.1486	104.7	+.0099	+6.7
1902.	5,106	143.5	+ 383	+ 7.5	57.71	97.1	-.62	-1.1	.1519	107.0	+.0066	+4.3
1903.	5,489	154.3			57.09	96.0			.1585	111.7		

MACHINISTS, Male.

[Data from 218 establishments.]

Av. 1890-99.	5,414	100.0	+5,162	+58.4	59.12	100.0	-3.00	-5.1	\$0.2404	100.0	+\$0.0005	+12.7
1890.	5,302	97.9	+5,274	+61.8	59.32	100.7	-3.40	-5.7	.2413	100.4	+.0296	+12.5
1891.	5,414	100.0	+5,162	+58.4	59.47	100.6	-3.35	-5.6	.2435	101.3	+.0274	+11.3
1892.	5,109	99.9	+5,167	+58.6	59.24	100.2	-3.12	-5.3	.2459	102.3	+.0250	+10.2
1893.	5,677	104.9	+2,899	+51.1	59.03	99.8	-2.91	-4.9	.2450	101.9	+.0259	+10.6
1894.	4,339	80.1	+4,237	+97.6	59.07	99.9	-2.85	-5.0	.2347	97.6	+.0362	+15.4
1895.	4,917	90.8	+3,659	+74.4	59.08	99.9	-2.86	-5.0	.2347	97.6	+.0362	+15.4
1896.	5,176	95.6	+3,490	+65.7	59.01	99.8	-2.89	-4.9	.2397	99.7	+.0312	+13.0
1897.	5,659	93.4	+3,517	+69.5	58.96	99.7	-2.84	-4.8	.2397	99.7	+.0312	+13.0
1898.	6,038	111.9	+2,518	+41.6	59.11	100.0	-2.99	-5.1	.2377	98.9	+.0332	+14.0
1899.	6,793	125.5	+1,783	+26.2	58.72	99.3	-2.60	-4.4	.2417	100.5	+.0252	+12.1
1900.	7,088	130.9	+1,488	+21.0	58.56	99.1	-2.44	-4.2	.2485	103.4	+.0224	+9.9
1901.	7,646	141.2	+ 930	+12.2	57.37	97.0	-1.25	-2.2	.2555	106.3	+.0154	+ 6.0
1902.	8,221	151.8	+ 355	+ 4.3	56.56	95.7	-.44	-.8	.2646	110.1	+.0063	+ 2.4
1903.	8,576	158.4			56.12	94.9			.2709	112.7		

MOLDERS, BRASS, Male.

[Data from 38 establishments.]

Av. 1890-99.	230	100.0	+ 94	+42.7	58.71	100.0	- 3.03	-5.2	\$0.2577	100.0	+\$0.0439	+17.0
1890.	199	90.5	+115	+57.8	58.69	100.0	-3.01	-5.1	.2536	98.4	+.0480	+18.9
1891.	213	96.8	+101	+47.4	58.58	99.8	-2.90	-5.0	.2571	99.8	+.0445	+17.3
1892.	222	100.9	+ 92	+41.4	58.76	100.1	-3.08	-5.2	.2635	102.3	+.0381	+14.5
1893.	222	100.9	+ 92	+41.4	58.69	100.0	-3.01	-5.1	.2616	101.5	+.0400	+15.3
1894.	280	120.9	+114	+57.0	58.70	100.0	-3.02	-5.1	.2539	98.5	+.0477	+18.5
1895.	286	123.6	+108	+52.4	58.78	100.1	-3.10	-5.3	.2479	96.2	+.0537	+21.7
1896.	293	126.3	+111	+54.7	58.71	100.0	-3.03	-5.2	.2605	101.1	+.0411	+15.8
1897.	215	97.7	+ 99	+46.0	58.75	100.1	-3.07	-5.2	.2584	100.3	+.0432	+16.7
1898.	251	111.1	+ 63	+25.1	58.64	99.9	-2.96	-5.0	.2599	100.9	+.0417	+16.0
1899.	270	122.7	+ 41	+16.3	58.79	100.1	-3.11	-5.3	.2606	101.1	+.0410	+15.7
1900.	255	115.9	+ 59	+23.1	58.40	99.5	-2.72	-4.7	.2651	102.9	+.0365	+13.8
1901.	293	133.2	+ 21	+ 7.2	58.18	99.1	-2.50	-4.3	.2769	107.5	+.0247	+ 8.9
1902.	302	137.3	+ 12	+ 4.0	56.83	96.8	-1.15	-2.0	.2837	114.0	+.0079	+ 2.7
1903.	311	142.7			55.68	94.8			.3016	117.0		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FOUNDRY AND MACHINE SHOP—Concluded.

MOLDERS, IRON, Male.

[Data from 183 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	2,974	100.0	+1,244	+41.8	59.31	100.0	-2.51	-4.2	\$0.2526	100.0	+\$0.0510	+20.2
1890	2,962	99.6	+1,256	+42.4	59.51	100.3	-2.71	-4.6	.2540	100.6	+.0496	+19.5
1891	2,952	99.3	+1,266	+42.9	59.60	100.5	-2.80	-4.7	.2565	101.5	+.0471	+18.4
1892	3,032	102.0	+1,186	+39.1	59.49	100.3	-2.69	-4.5	.2548	100.9	+.0488	+19.2
1893	3,181	107.0	+1,037	+32.6	59.18	99.8	-2.38	-4.0	.2557	101.2	+.0479	+18.7
1894	2,519	84.7	+1,699	+67.4	59.10	99.6	-2.30	-3.9	.2472	97.9	+.0564	+22.8
1895	2,781	93.5	+1,437	+51.7	59.29	100.0	-2.49	-4.2	.2476	98.0	+.0560	+22.6
1896	2,909	97.8	+1,309	+45.0	59.24	99.9	-2.44	-4.1	.2507	99.2	+.0529	+21.1
1897	2,732	91.9	+1,186	+54.4	59.17	99.8	-2.37	-4.0	.2525	100.0	+.0511	+20.2
1898	3,234	108.7	+984	+30.4	59.34	100.1	-2.54	-4.3	.2503	99.1	+.0533	+21.3
1899	3,439	115.6	+779	+22.7	59.14	99.7	-2.34	-4.0	.2568	101.7	+.0468	+18.2
1900	3,790	127.1	+428	+11.3	59.07	99.6	-2.27	-3.8	.2694	106.7	+.0342	+12.7
1901	3,793	127.5	+425	+11.2	58.47	98.6	-1.67	-2.9	.2739	108.4	+.0297	+10.8
1902	3,968	133.4	+250	+6.3	57.65	97.2	-.85	-1.5	.2894	114.6	+.0142	+4.9
1903	4,218	141.8			56.80	95.8			.3036	120.2		

PATTERN MAKERS, Male.

[Data from 161 establishments.]

Av. 1890-99.	727	100.0	+239	+32.9	59.07	100.0	-3.07	-5.2	\$0.2775	100.0	+\$0.0150	+16.2
1890	670	92.2	+296	+44.2	59.43	100.6	-3.43	-5.8	.2784	100.3	+.0441	+15.8
1891	684	94.1	+282	+41.2	59.40	100.6	-3.40	-5.7	.2802	101.0	+.0423	+15.1
1892	686	94.4	+280	+40.8	59.35	100.5	-3.35	-5.6	.2804	101.0	+.0421	+15.0
1893	737	101.4	+229	+31.1	58.96	99.8	-2.96	-5.0	.2834	102.1	+.0391	+13.8
1894	624	85.8	+342	+54.8	59.06	100.0	-3.06	-5.2	.2683	96.7	+.0542	+20.2
1895	718	98.8	+248	+34.5	59.04	99.9	-3.04	-5.1	.2711	97.7	+.0511	+19.0
1896	728	100.1	+238	+32.7	58.89	99.7	-2.89	-4.9	.2771	99.9	+.0454	+16.4
1897	701	96.4	+265	+37.8	58.79	99.5	-2.79	-4.7	.2760	99.5	+.0465	+16.8
1898	829	114.0	+137	+16.5	59.10	100.1	-3.10	-5.2	.2805	101.1	+.0420	+15.0
1899	889	122.3	+77	+8.7	58.64	99.3	-2.64	-4.5	.2799	100.9	+.0426	+15.2
1900	902	124.1	+64	+7.1	58.44	98.9	-2.44	-4.2	.2895	104.3	+.0330	+11.4
1901	871	120.2	+92	+10.5	57.69	97.7	-1.69	-2.9	.2864	106.8	+.0261	+8.8
1902	921	126.7	+45	+4.9	56.90	96.3	-.90	-1.6	.3091	111.4	+.0134	+4.3
1903	966	132.9			56.00	94.8			.3225	116.2		

FRUITS AND VEGETABLES, CANNING AND PRESERVING.

CANNERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	8	100.0	+2	+25.0	70.00	100.0			\$0.1700	100.0	+\$0.0050	+2.9
1890	10	125.0			70.00	100.0			.1750	102.9		
1891	10	125.0			70.00	100.0			.1750	102.9		
1892	10	125.0			70.00	100.0			.1750	102.9		
1893	10	125.0			70.00	100.0			.1750	102.9		
1894	8	100.0	+2	+25.0	70.00	100.0			.1750	102.9		
1895	8	100.0	+2	+25.0	70.00	100.0			.1750	102.9		
1896	6	75.0	+4	+66.7	70.00	100.0			.1750	102.9		
1897	6	75.0	+4	+66.7	70.00	100.0			.1500	88.2	+.0250	+16.7
1898	6	75.0	+4	+66.7	70.00	100.0			.1500	88.2	+.0250	+16.7
1899	6	75.0	+4	+66.7	70.00	100.0			.1750	102.9		
1900	8	100.0	+2	+25.0	70.00	100.0			.1750	102.9		
1901	8	100.0	-2	-25.0	70.00	100.0			.1750	102.9		
1902	10	125.0			70.00	100.0			.1750	102.9		
1903	10	125.0			70.00	100.0			.1750	102.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FRUITS AND VEGETABLES, CANNING AND PRESERVING

Concluded.

CANNERS, Female.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase or decrease 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	61	100.0	-1	-1.6	81.52	100.0	-0.15	+0.2	\$0.1164	100.0	+\$0.0021	+1
1890	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1891	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1892	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1893	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1894	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1895	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1896	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1897	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1898	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1899	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1900	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1901	62	101.6	2	3.2	81.29	99.7	.38	+ .5	.1166	100.2	+	.0019
1902	60	98.4			81.67	100.2			.1163	99.9	+	.0022
1903	60	98.4			81.67	100.2			.1185	101.8		

COOKERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	45	100.0	4	8.9	72.48	100.0	0.13	+0.2	\$0.1578	100.0	+\$0.0020	+1
1890	46	102.2	5	10.9	71.84	99.5	.22	+ .3	.1565	99.2	+	.0022
1891	50	111.1	9	18.0	72.80	100.9	.75	1.0	.1600	101.4	+	.0187
1892	50	111.1	9	18.0	72.80	100.9	.75	1.0	.1600	101.4	+	.0187
1893	50	111.1	9	18.0	72.80	100.9	.75	1.0	.1600	101.4	+	.0187
1894	46	102.2	5	10.9	71.84	99.5	.22	+ .3	.1565	99.2	+	.0022
1895	45	91.1			72.09	99.8			.1573	99.7	+	.0214
1896	44	91.1			72.09	99.8			.1573	99.7	+	.0214
1897	44	91.1			72.09	99.8			.1573	99.7	+	.0214
1898	40	88.9	-1	-2.5	71.75	99.4	.30	+ .4	.1563	99.1	+	.0224
1899	46	102.2	5	10.9	71.84	99.5	.22	+ .3	.1565	99.2	+	.0022
1900	46	102.2	5	10.9	71.84	99.5	.22	+ .3	.1565	99.2	+	.0022
1901	44	91.1			72.09	99.8			.1573	113.2		
1902	44	91.1			72.09	99.8			.1573	113.2		
1903	44	91.1			72.09	99.8			.1573	113.2		

FURNITURE.

CABINETMAKERS, Male.

[Data for employees from 1 established works for entire period. Data for hours and wages from 2 establishments, 1890-1892, and 1 establishment, 1893-1903.]

Av. 1890-99.	75	100.0	200	2.7	57.4	100.0	1.56	3.3	\$0.2076	100.0	+\$0.0036	+1
1890	75	92.0	200	2.7	57.4	100.2	2.69	4.4	.2114	101.8	+	.0312
1891	75	91.6	252	3.4	58.02	100.9	2.29	3.8	.2123	102.3	+	.0305
1892	84	102.1	188	2.4	57.75	99.7	1.71	3.0	.2170	104.5	+	.0259
1893	80	101.3	196	2.6	57.78	99.4	1.70	2.7	.2164	103.6	+	.0276
1894	74	95.9	238	3.2	57.67	98.4	1.00	1.8	.2078	100.1	+	.0148
1895	74	92.8	207	2.7	57.80	99.8	1.81	3.1	.2069	98.2	+	.0387
1896	712	96.9	250	2.9	57.82	99.8	1.80	3.1	.2078	97.2	+	.0408
1897	840	100.4	160	1.9	57.82	99.8	1.80	3.1	.2078	98.1	+	.0380
1898	825	103.3	170	2.1	57.81	99.7	2.10	3.6	.1987	95.7	+	.0339
1899	945	115.3	90	1.6	58.18	100.4	2.16	3.7	.2047	98.6	+	.0379
1900	880	112.8	100	1.3	57.80	99.9	1.87	3.2	.2084	100.4	+	.0312
1901	864	108.4	178	1.6	57.90	98.5	.91	1.6	.2225	107.2	+	.0201
1902	903	119.6	49	0.8	57.60	98.8	.90	.1	.2380	115.1	+	.0036
1903	1 002	125.7			59.02	98.7			.2426	116.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 713.]

FURNITURE—Continued.**CARVERS, HAND, Male.**

[Data from 20 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	78	100.0	+16	+20.5	56.95	100.0	-0.13	-0.2	\$0.2476	100.0	+\$0.0315	+12.7
1890	65	83.3	+29	+44.6	58.74	103.1	-1.92	-3.3	.2402	97.0	+.0389	+16.2
1891	74	94.9	+20	+27.0	56.84	99.8	-.02	-.04	.2554	103.2	+.0237	+ 9.3
1892	95	121.8	-1	-1.3	54.65	96.0	+2.17	+4.0	.2814	113.7	-.0023	-.8
1893	74	94.9	+20	+27.0	58.41	102.6	-1.59	-2.7	.2419	97.7	+.0372	+15.4
1894	71	91.0	+23	+32.4	56.49	99.2	+1.33	+1.6	.2366	95.6	+.0425	+18.0
1895	77	98.7	+17	+22.1	58.18	102.2	-1.36	-2.3	.2085	84.6	+.0696	+33.2
1896	71	91.0	+23	+32.4	57.87	101.6	-1.06	-1.8	.2358	95.2	+.0433	+18.4
1897	78	100.0	+16	+20.5	56.65	99.5	+1.17	+1.8	.2500	101.0	+.0291	+11.6
1898	80	102.6	+14	+17.5	56.81	99.8	+1.01	+1.02	.2409	99.7	+.0322	+13.0
1899	99	126.9	-5	-5.1	54.90	96.4	+1.92	+3.5	.2780	112.3	+.0011	+ .4
1900	74	94.9	+20	+27.0	57.66	101.2	-.84	-1.5	.2531	102.2	+.0280	+10.3
1901	79	101.3	+15	+19.0	56.61	99.4	+1.21	+1.4	.2781	112.3	+.0010	+ .4
1902	97	124.4	-3	-3.1	55.37	97.2	+1.45	+2.6	.2947	119.0	-.0156	- 5.3
1903	94	120.5			56.82	99.8			.2791	112.7		

FINISHERS, Male.

[Data from 8 establishments.]

Av. 1890-99.	78	100.0	- 9	-11.5	57.54	100.0	- 3.40	-5.9	\$0.1863	100.0	+\$0.0769	+41.3
1890	75	96.2	- 6	- 8.0	58.00	100.8	-3.86	-6.7	.1819	97.6	+.0813	+44.7
1891	76	97.4	- 7	- 9.2	57.82	100.5	-3.68	-6.4	.1949	101.4	+.0683	+35.0
1892	82	106.1	-13	-15.9	57.22	99.4	-3.08	-5.1	.1880	100.9	+.0752	+40.0
1893	85	110.3	-17	-19.8	56.87	98.8	-2.73	-4.8	.1902	102.1	+.0730	+38.4
1894	83	106.4	-14	-16.9	56.55	98.3	-2.41	-4.3	.1851	99.4	+.0781	+42.2
1895	76	97.4	- 7	- 9.2	56.70	98.5	-2.56	-4.5	.1803	96.8	+.0829	+46.0
1896	75	96.2	- 6	- 8.0	57.95	100.7	-3.81	-6.6	.1864	100.1	+.0708	+41.2
1897	73	93.6	-4	-5.5	57.82	100.5	-3.68	-6.4	.1888	100.3	+.0764	+40.9
1898	72	92.3	-3	-4.2	57.94	100.7	-3.80	-6.6	.1832	98.3	+.0800	+43.7
1899	81	103.8	-12	-14.8	58.52	101.7	-4.38	-7.5	.1861	99.9	+.0771	+41.4
1900	74	94.9	-5	-6.8	57.61	100.2	-3.50	-6.1	.1906	102.3	+.0726	+38.1
1901	84	107.7	-15	-17.9	56.39	98.0	-2.25	-4.0	.2157	115.8	+.0475	+22.0
1902	90	115.4	-21	-23.3	54.87	95.4	-1.73	-3.3	.2379	127.7	+.0253	+10.6
1903	69	88.5			54.14	91.1			.2632	141.3		

MACHINE WOODWORKERS, Male.

[Data for employees from 41 establishments for entire period. Data for hours and wages from 41 establishments, 1890-1892; 42 establishments, 1893-1903.]

Av. 1890-99.	794	100.0	+125	+15.7	58.50	100.0	+0.16	+0.3	\$0.1681	100.0	+\$0.0205	+12.2
1890	789	99.4	+130	+16.5	59.29	101.4	-.60	-1.0	.1692	100.7	+.0194	+11.5
1891	790	99.5	+128	+16.3	59.06	101.0	-.37	-.6	.1699	101.1	+.0187	+11.0
1892	780	98.2	+139	+17.8	58.50	100.0	+1.19	+1.3	.1704	101.4	+.0182	+10.7
1893	765	96.3	+151	+20.1	58.19	100.0	+1.20	+1.3	.1678	99.8	+.0208	+12.4
1894	715	90.8	+174	+23.4	57.32	98.0	+1.37	+2.4	.1657	98.6	+.0229	+13.8
1895	771	97.1	+148	+19.2	58.17	99.4	+1.52	+1.9	.1658	98.6	+.0228	+13.8
1896	817	102.9	+102	+12.5	58.17	99.9	+1.22	+1.4	.1667	99.2	+.0219	+13.1
1897	829	104.4	+90	+10.9	58.10	99.3	+1.39	+1.0	.1687	100.4	+.0199	+11.8
1898	811	102.1	+108	+13.3	58.63	100.2	+1.06	+1.1	.1673	99.5	+.0213	+12.7
1899	838	105.5	+81	+9.7	58.98	100.8	-.29	-.5	.1699	101.1	+.0187	+11.0
1900	889	112.0	+39	+3.4	58.97	100.8	-.28	-.5	.1717	102.1	+.0169	+ 9.8
1901	943	118.8	+24	+2.5	59.12	101.1	-.43	-.7	.1731	103.0	+.0155	+ 8.9
1902	916	115.4	+3	+1.03	58.86	100.6	-.17	-.3	.1828	108.7	+.0058	+ 3.2
1903	919	115.7			58.69	100.3			.1886	112.2		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899 = 100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

FURNITURE—Continued.

SAWYERS, BAND, Male.

[Data for employees from 25 establishments for entire period. Data for hours and wages from 25 establishments, 1890-1892; 26 establishments, 1893-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	54	100.0	+19	+35.2	58.33	100.0	+0.40	+0.7	\$0.1899	100.0	+\$0.0110	+5.8
1890	51	94.4	+22	+43.1	59.12	101.4	— .39	— .7	1897	105.2	+.0012	+.6
1891	51	94.4	+23	+43.1	58.53	100.3	+ .20	+ .3	1898	102.6	+.0061	+.41
1892	50	92.6	+22	+46.0	58.02	99.5	+ .71	+1.2	1891	102.7	+.0038	+.23
1893	53	98.1	+20	+37.7	58.61	100.5	+ .12	+ .2	1921	101.2	+.0088	+.46
1894	49	90.7	+24	+49.0	56.20	96.3	+1.53	+2.7	1881	99.1	+.0128	+.68
1895	52	96.3	+21	+40.4	57.92	99.3	+ .81	+1.4	1876	98.8	+.0133	+.71
1896	53	101.9	+18	+32.7	58.79	100.8	— .06	— .1	1855	97.7	+.0151	+.83
1897	55	101.9	+18	+32.7	58.34	100.0	+ .39	+ .7	1869	98.4	+.0149	+.79
1898	61	113.0	+12	+19.7	58.31	100.0	+ .42	+ .7	1843	97.1	+.0166	+.93
1899	64	118.5	+9	+14.1	59.42	101.9	— .69	—1.2	1851	97.5	+.0158	+.89
1900	67	124.1	+6	+9.0	59.10	101.3	— .37	— .6	1908	100.5	+.0101	+.55
1901	70	129.6	+3	+4.3	58.81	100.8	— .08	— .1	1970	103.7	+.0088	+.47
1902	71	137.0	— 1	— 1.4	58.80	100.8	— .07	— .1	1892	104.4	+.0027	+.14
1903	73	135.2			58.73	100.7			2009	105.8		

SAWYERS, CIRCULAR, Male.

[Data for employees from 25 establishments for entire period. Data for hours and wages from 25 establishments, 1890-1892; 26 establishments, 1893-1903.]

Av. 1890-99.	110	100.0	22	+20.0	59.08	100.0	—0.54	—0.9	\$0.1792	100.0	—\$0.0240	—13.4
1890	100	90.9	+32	+32.0	59.39	100.5	— .85	—1.4	1822	101.7	+.0210	+.17
1891	100	90.9	+32	+32.0	59.30	100.4	— .76	—1.3	1832	102.2	+.0200	+.19
1892	101	91.8	+31	+30.7	59.25	100.3	— .71	—1.2	1838	102.6	+.0191	+.18
1893	102	92.7	+30	+29.4	59.28	100.3	— .74	—1.2	1827	102.0	+.0205	+.19
1894	102	92.7	+30	+29.4	56.86	96.2	+1.68	+3.0	1754	97.9	+.0278	+.57
1895	109	99.1	+23	+21.1	59.32	100.4	— .78	—1.3	1768	98.7	+.0254	+.51
1896	120	109.1	+12	+10.0	59.24	100.3	— .70	—1.2	1756	98.0	+.0259	+.51
1897	117	106.1	+15	+12.8	59.37	100.5	— .83	—1.4	1781	99.4	+.0251	+.50
1898	121	110.0	+11	+9.1	59.24	100.3	— .70	—1.2	1764	98.4	+.0268	+.53
1899	125	113.6	+7	+5.6	59.35	100.8	—1.01	—1.7	1778	99.2	+.0254	+.50
1900	126	114.5	+6	+4.8	59.00	99.9	— .46	— .8	1844	102.9	+.0188	+.39
1901	119	108.2	+13	+10.9	58.64	99.3	— .10	— .2	1920	107.1	+.0112	+.25
1902	121	110.0	+11	+9.1	58.41	98.4	+ .13	+ .2	1897	111.4	+.0045	+.25
1903	132	129.0			58.51	99.1			2052	113.4		

SAWYERS, JIG, Male.

[Data from 6 establishments.]

Av. 1890-99.	6	100.0			57.52	100.0	3.95	6.9	\$0.2218	100.0	+\$0.0535	+24.1
1890	6	100.0			57.83	100.4	—1.16	—2.2	2061	92.9	—0.0092	—4.3
1891	6	100.0			57.67	100.1	—4.00	—6.9	2228	100.5	+.0525	+23.7
1892	6	100.0			57.67	100.1	—4.00	—6.9	2186	98.6	—0.0567	—25.9
1893	6	100.0			57.67	100.1	—4.00	—6.9	2239	100.9	+.0511	+23.0
1894	6	100.0			57.67	100.1	—4.00	—6.9	2239	100.9	+.0511	+23.0
1895	6	100.0			57.67	100.1	—4.00	—6.9	2224	100.3	+.0529	+23.8
1896	6	100.0			57.67	100.1	—4.00	—6.9	2186	98.6	—0.0567	—25.9
1897	6	100.0			57.67	100.1	—4.00	—6.9	2261	101.9	+.0492	+22.3
1898	6	100.0			57.67	100.1	—4.00	—6.9	2239	100.9	+.0511	+23.0
1899	6	100.0			57.00	98.9	3.31	5.8	2316	104.4	+.0437	+18.9
1900	6	100.0			55.17	95.7	1.50	2.7	2286	107.6	+.0367	+15.4
1901	6	100.0			54.50	94.6	.83	—1.5	2323	113.8	+.0230	+9.1
1902	6	100.0			53.67	93.1			2753	121.1		
1903	6	100.0			53.67	93.1			2753	121.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

FURNITURE—Concluded.

UPHOLSTERERS, Male.

[Data from 11 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	149	100.0	+18	+12.1	58.81	100.0	-4.62	-7.9	\$0.2359	100.0	+\$0.0596	+25.3
1890	150	100.7	+17	+11.3	59.09	100.5	-4.90	-8.3	.2346	99.4	+.0609	+26.0
1891	148	99.3	+19	+12.8	59.01	100.3	-4.82	-8.2	.2392	101.4	+.0563	+23.5
1892	160	107.4	+7	+4.4	58.76	99.9	-4.57	-7.8	.2364	100.2	+.0591	+25.0
1893	149	100.0	+18	+12.1	58.99	100.3	-4.80	-8.1	.2317	98.2	+.0638	+27.5
1894	147	98.7	+20	+13.6	58.92	100.2	-4.73	-8.0	.2372	100.6	+.0583	+24.6
1895	139	93.3	+28	+20.1	58.85	100.1	-4.66	-7.9	.2356	99.9	+.0599	+25.4
1896	146	98.0	+21	+14.4	58.61	99.7	-4.42	-7.5	.2313	98.1	+.0642	+27.8
1897	146	98.0	+21	+14.4	58.64	99.7	-4.45	-7.6	.2302	97.6	+.0653	+28.4
1898	150	100.7	+17	+11.3	58.61	99.7	-4.42	-7.5	.2372	100.6	+.0583	+24.6
1899	158	106.0	+9	+5.7	58.60	99.6	-4.41	-7.5	.2454	104.0	+.0501	+20.4
1900	159	106.7	+8	+5.0	57.79	98.3	-3.60	-6.2	.2501	106.0	+.0454	+18.2
1901	169	113.4	-2	-1.2	55.50	94.4	-1.31	-2.4	.2857	121.1	+.0098	+3.4
1902	169	113.4	-2	-1.2	55.82	94.9	-1.63	-2.9	.2953	125.2	+.0002	+
1903	167	112.1			54.19	92.1			.2955	125.3		

VARNISHERS, Male.

[Data for employees from 35 establishments for entire period. Data for hours and wages from 35 establishments, 1890-1892: 36 establishments, 1893-1903.]

Av. 1890-99.	329	100.0	+123	+37.4	58.42	100.0	-0.83	-1.4	\$0.1740	100.0	+\$0.0208	+12.0
1890	283	86.0	+169	+59.7	59.28	101.5	-1.69	-2.9	.1712	98.4	+.0236	+13.8
1891	296	90.0	+156	+52.7	58.90	100.8	-1.31	-2.2	.1734	99.7	+.0214	+12.3
1892	321	97.6	+131	+40.8	58.57	100.3	-.98	-1.7	.1712	98.4	+.0236	+13.8
1893	305	92.7	+147	+45.2	58.33	99.8	-.74	-1.3	.1730	99.4	+.0218	+12.6
1894	287	87.2	+165	+57.5	57.01	97.6	+.55	+1.0	.1751	100.6	+.0197	+11.3
1895	297	90.3	+155	+52.2	58.52	100.2	-.93	-1.6	.1701	97.8	+.0247	+14.5
1896	313	95.1	+139	+44.4	58.57	100.3	-.98	-1.7	.1652	94.9	+.0296	+17.9
1897	380	115.5	-72	-18.9	58.01	99.3	-.42	-.7	.1823	104.8	+.0125	+6.9
1898	382	116.1	+70	+18.3	58.74	100.5	-1.15	-2.0	.1698	97.6	+.0250	+14.7
1899	421	128.0	+31	+7.4	58.27	99.7	-.68	-1.2	.1891	108.7	+.0057	+3.0
1900	429	130.4	+23	+5.4	58.39	99.9	-.80	-1.4	.1830	105.2	+.0118	+6.4
1901	411	124.0	+11	+2.5	58.15	99.5	-.56	-1.0	.1886	108.4	+.0062	+3.3
1902	471	143.2	-19	-4.0	57.45	98.3	+.14	+2	.2007	115.3	+.0059	-2.9
1903	452	137.4			57.59	98.6			.1948	112.0		

GAS.

CHARGERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	106	100.0	-18	-17.0	79.34	100.0	-4.49	-5.7	\$0.2461	100.0	+\$0.0068	+2.8
1890	154	145.3	-66	-42.9	79.42	100.1	-4.57	-5.8	.2434	98.9	+.0095	+3.9
1891	140	132.1	-52	-37.1	79.54	100.3	-4.69	-5.9	.2422	98.4	+.0107	+4.4
1892	117	110.4	-29	-24.8	80.34	101.8	-5.49	-6.8	.2448	99.5	+.0081	+3.3
1893	95	89.6	-7	-7.4	80.85	101.9	-6.00	-7.4	.2460	100.0	+.0069	+2.8
1894	91	85.8	-3	-3.3	80.92	102.0	-6.07	-7.5	.2465	100.2	+.0064	+2.6
1895	90	84.9	-2	-2.2	80.70	101.7	-5.85	-7.2	.2473	100.5	+.0056	+2.3
1896	99	93.4	-11	-11.1	80.64	101.6	-5.79	-7.2	.2475	100.6	+.0054	+2.2
1897	97	91.5	-9	-9.3	80.30	101.2	-5.45	-6.8	.2467	100.2	+.0062	+2.5
1898	82	77.4	+6	+7.3	77.68	97.9	-2.83	-3.6	.2480	100.8	+.0049	+2.0
1899	93	87.7	-5	-5.4	73.01	92.0	+1.84	+2.5	.2483	100.9	+.0046	+1.9
1900	95	89.6	-7	-7.4	73.24	92.3	+1.61	+2.2	.2557	103.9	+.0028	-1.1
1901	109	102.8	-21	-19.3	74.69	94.1	+.16	+2	.2251	91.5	+.0278	+12.4
1902	94	88.7	-6	-6.4	73.13	92.2	+1.72	+2.4	.2416	98.2	+.0113	+4.7
1903	88	83.0			74.85	94.3			.2529	102.8		

TABLE 1.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

GAS—Concluded.

LABORERS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	70	100.0	458	+ 82.9	60.60	100.0			\$0.1558	100.0	\$0.0014	100.0
1890	73	104.3	+ 59	+ 75.3	60.00	100.0			.1537	98.7	.0007	50.3
1891	48	68.6	+ 80	+ 105.7	60.00	100.0			.1529	98.1	.0015	100.0
1892	56	79.7	+ 82	+ 107.3	60.00	100.0			.1466	94.1	.0078	53.3
1893	49	70.1	+ 88	+ 120.0	60.00	100.0			.1555	99.8	.0011	76.7
1894	81	115.7	+ 11	+ 52.1	60.00	100.0			.1619	103.9	.0075	54.0
1895	58	82.9	+ 70	+ 120.7	60.00	100.0			.1528	98.1	.0016	113.0
1896	47	67.1	+ 81	+ 122.3	60.00	100.0			.1610	103.3	.0002	14.1
1897	115	164.3	+ 13	+ 11.3	60.00	100.0			.1613	103.5	.0002	14.3
1898	122	174.3	+ 6	+ 4.9	60.00	100.0			.1598	98.7	.0002	14.4
1899	71	101.4	+ 57	+ 80.3	60.00	100.0			.1585	101.7	.0001	2.8
1900	97	138.6	+ 31	+ 32.0	60.00	100.0			.1505	96.6	.0039	25.8
1901	78	111.4	+ 50	+ 64.1	60.00	100.0			.1644	105.5	.0100	6.1
1902	95	135.7	+ 33	+ 31.7	60.00	100.0			.1553	99.7	.0002	14.6
1903	128	182.9			60.00	100.0			.1544	99.1		

PIPE FITTERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	61	100.0	+ 20	+ 32.8	60.00	100.0	- 1.48	- 2.5	\$0.2147	100.0	-\$0.0073	- 3.0
1890	52	85.2	+ 39	+ 63.9	60.00	100.0	- 1.48	- 2.5	.2504	102.3	.0016	6.0
1891	37	60.7	+ 11	+ 18.9	60.00	100.0	- 1.48	- 2.5	.2505	102.4	.0015	5.8
1892	44	72.1	+ 37	+ 61.1	60.00	100.0	- 1.48	- 2.5	.2488	101.7	.0012	4.5
1893	55	86.9	+ 28	+ 45.8	60.00	100.0	- 1.48	- 2.5	.2509	102.5	.0011	4.1
1894	58	95.1	+ 23	+ 37.7	60.00	100.0	- 1.48	- 2.5	.2487	101.6	.0012	4.5
1895	68	111.5	+ 13	+ 20.1	60.00	100.0	- 1.48	- 2.5	.2189	101.7	.0011	4.2
1896	64	104.9	+ 17	+ 28.6	60.00	100.0	- 1.48	- 2.5	.2180	101.3	.0010	3.8
1897	56	91.8	+ 25	+ 41.6	60.00	100.0	- 1.48	- 2.5	.2136	99.6	.0004	1.1
1898	122	200.0	+ 1	+ 1.6	60.00	100.0	- 1.48	- 2.5	.2210	101.5	.0010	3.8
1899	70	114.8	+ 11	+ 18.7	60.00	100.0	- 1.48	- 2.5	.2335	108.4	.0185	12.0
1900	67	109.8	+ 14	+ 23.9	60.00	100.0	- 1.48	- 2.5	.2430	100.1	.0070	4.4
1901	67	109.8	+ 14	+ 23.9	60.00	100.0	- 1.48	- 2.5	.2319	94.8	.0201	8.7
1902	115	188.5	+ 31	+ 50.6	60.00	100.0	- 1.48	- 2.5	.2406	98.3	.0114	4.7
1903	81	132.8			58.92	97.5			.2520	103.0		

RETORT MEN, Male.

[Data from 1 establishment.]

Av. 1890-99.	218	100.0	+ 36	+ 21.1	71.36	100.0	5.12	+ 6.8	\$0.2353	100.0	-\$0.0002	- 0.1
1890	206	120.0	+ 94	+ 57.5	76.3	102.1	6.71	+ 8.8	.2310	98.2	.0017	6.0
1891	262	120.2	+ 90	+ 41.1	76.79	102.3	6.86	+ 8.9	.2287	97.2	.0008	2.8
1892	255	117.0	+ 85	+ 39.5	76.80	102.3	6.96	+ 9.1	.2191	102.9	.0006	2.7
1893	224	102.8	+ 79	+ 36.2	76.61	102.2	6.80	+ 8.9	.2335	99.2	.0020	7.0
1894	220	100.9	+ 38	+ 17.8	76.19	101.8	6.45	+ 8.5	.2335	98.2	.0020	7.0
1895	225	103.2	+ 35	+ 16.5	76.80	104.1	5.96	+ 7.9	.2317	98.5	.0018	6.1
1896	214	107.4	+ 32	+ 15.5	76.38	101.9	6.31	+ 8.6	.2328	98.9	.0027	9.1
1897	210	96.3	+ 38	+ 17.9	76.37	101.9	6.33	+ 8.6	.2326	99.3	.0019	6.8
1898	147	67.4	+ 25	+ 15.0	68.29	91.1	1.55	+ 2.3	.2133	103.4	.0078	3.2
1899	156	62.4	+ 36	+ 19.3	69.76	93.1	1.08	+ 1.1	.2125	103.1	.0070	2.9
1900	150	78.0	+ 2	+ 1.3	75.20	87.0	4.61	+ 7.1	.2159	104.5	.0104	4.2
1901	157	72.0	+ 15	+ 9.6	71.67	95.6	1.82	+ 2.6	.2217	94.2	.0138	6.2
1902	156	71.6	+ 16	+ 10.3	66.71	89.0	3.10	+ 4.6	.2002	123.3	.0547	18.8
1903	172	78.9			64.81	93.2			.2355	100.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

GLASS.

BATCH MAKERS, Male.

[Data from 8 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	29	100.0			54.03	100.0	+0.04	+0.1	\$0.1904	100.0	+\$0.0068	+3.0
1890	26	89.7	+3	+11.5	54.77	101.4	-.70	-1.3	.1878	98.6	+.0084	+4.5
1891	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1877	98.6	+.0085	+4.5
1892	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1877	98.6	+.0085	+4.5
1893	29	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1892	99.4	+.0070	+3.7
1894	26	89.7	+3	+11.5	53.38	98.8	+.69	+1.3	.1940	101.9	+.0022	+1.1
1895	26	89.7	+3	+11.5	53.38	98.8	+.69	+1.3	.1936	101.7	+.0026	+1.3
1896	26	89.7	+3	+11.5	53.38	98.8	+.69	+1.3	.1940	101.9	+.0022	+1.1
1897	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1892	99.4	+.0070	+3.7
1898	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1902	99.9	+.0089	+3.2
1899	32	110.3	-3	-9.4	54.06	100.1	+.01	+0.2	.1907	100.2	+.0055	+2.9
1900	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1913	100.5	+.0049	+2.6
1901	30	103.4	-1	-3.3	54.27	100.4	-.20	-.4	.1908	100.2	+.0054	+2.8
1902	31	106.9	-2	-6.5	53.87	99.7	+.20	+.4	.1915	100.6	+.0047	+2.5
1903	29	100.0			54.07	100.1			.1862	103.0		

BLOWERS, FLINT GLASS, Male.

[Data from 5 establishments.]

Av. 1890-99.	225	100.0	+136	+60.4	50.39	100.0	-0.27	-0.5	\$0.5401	100.0	+\$0.0367	+6.8
1890	211	107.1	+120	+49.8	50.29	99.8	-.17	-.3	.5248	97.2	+.0520	+9.9
1891	278	123.6	+83	+29.9	50.25	99.7	-.13	-.3	.5317	98.4	+.0451	+8.5
1892	219	97.3	+112	+64.8	50.34	99.9	-.22	-.4	.5235	96.9	+.0533	+10.2
1893	155	68.9	+206	+132.9	50.47	100.2	-.35	-.7	.5323	98.6	+.0445	+8.4
1894	226	100.4	+135	+59.7	50.43	100.1	-.31	-.6	.5702	105.6	+.0066	+1.2
1895	213	94.7	+148	+69.5	50.41	100.1	-.32	-.6	.5340	98.9	+.0428	+8.0
1896	242	107.6	+119	+49.2	50.39	100.0	-.27	-.5	.5523	102.3	+.0245	+4.4
1897	212	94.2	+149	+70.3	50.45	100.1	-.33	-.7	.5526	103.4	+.0182	+3.3
1898	218	96.9	+143	+65.6	50.41	100.0	-.29	-.6	.5210	96.5	+.0558	+10.7
1899	246	109.3	+115	+46.7	50.42	100.1	-.30	-.6	.5527	102.3	+.0241	+4.4
1900	227	100.9	+134	+59.0	50.40	100.0	-.28	-.6	.5475	101.4	+.0293	+5.4
1901	317	140.9	+44	+13.9	50.23	99.7	-.11	-.2	.5728	106.1	+.0040	+.7
1902	323	145.0	+26	+8.4	50.20	99.6	-.08	-.2	.5700	105.5	+.0068	+1.2
1903	351	150.4			50.12	99.5			.5768	106.8		

BLOWERS, GREEN GLASS, Male.

[Data from 4 establishments.]

Av. 1890-99.	232	100.0	+203	+91.4	51.98	100.0	-0.96	-1.9	\$0.5066	100.0	+\$0.1022	+20.2
1890	136	61.3	+299	+212.5	52.65	101.3	-1.65	-3.1	.5110	101.1	+.0968	+18.9
1891	213	109.5	+182	+74.9	51.71	99.5	-.71	-1.4	.4990	98.7	+.1088	+21.8
1892	162	73.0	+263	+162.3	52.07	100.2	-1.07	-2.1	.5382	106.4	+.0696	+12.9
1893	133	59.9	+292	+219.5	52.92	101.8	-1.92	-3.6	.5025	99.4	+.1053	+21.0
1894	145	63.3	+280	+193.1	51.81	99.7	-.81	-1.6	.5065	100.2	+.1013	+20.0
1895	170	76.6	+255	+150.0	51.64	99.3	-.64	-1.2	.4951	97.9	+.1128	+22.8
1896	256	113.3	+169	+66.0	51.65	99.4	-.65	-1.3	.5029	99.3	+.1057	+21.1
1897	299	134.7	+126	+42.1	51.84	99.7	-.84	-1.6	.4866	96.0	+.1222	+25.0
1898	301	135.6	+124	+41.2	52.74	101.5	1.71	+3.3	.4787	94.7	+.1291	+27.2
1899	375	168.9	+50	+13.3	50.77	97.7	+.23	+.5	.5578	106.4	+.0700	+13.0
1900	435	195.9	-10	-2.3	51.00	98.1			.5333	117.3	+.0145	+2.4
1901	389	175.2	+36	+9.3	51.00	98.1			.4830	125.2	+.0252	+4.0
1902	384	173.0	+41	+10.7	51.00	98.1			.5869	118.1	+.0109	+1.8
1903	425	191.4			51.00	98.1			.6078	120.2		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

GLASS—Continued.

BLOWERS, WINDOW GLASS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	24	100.0	-1	-4.2	36.66	100.0	+0.12	+0.3	\$0.7404	100.0	-\$0.4334	-58
1890	24	100.0	-1	-4.2	36.63	99.9	+ .15	+ .4	.8202	110.8	+ .8536	+ 4
1891	29	120.8	-6	-20.7	36.66	100.0	+ .12	+ .3	.7740	104.5	+ .326	+ 3
1892	26	108.3	-3	-11.5	36.65	100.0	+ .13	+ .4	.8133	109.8	+ .365	+ 4
1893	25	104.2	-2	-8.0	36.68	100.1	+ .10	+ .3	.7701	104.0	+ .467	+ 3
1894	25	104.2	-2	-8.0	36.64	99.9	+ .14	+ .4	.7002	94.6	+ .4736	+ 3
1895	23	95.8			36.70	100.1	+ .08	+ .2	.5560	75.1	+ .6178	+ 11
1896	21	87.5	+2	+9.5	36.67	100.1	+ .11	+ .3	.6536	88.3	+ .5302	+ 3
1897	20	83.3	+3	+15.0	36.70	100.1	+ .08	+ .2	.6948	93.8	+ .4790	+ 5
1898	25	104.2	-2	-8.0	36.64	99.9	+ .14	+ .4	.8149	110.1	+ .3589	+ 4
1899	25	101.2	-2	-8.0	36.64	99.9	+ .14	+ .4	.8067	109.0	+ .3671	+ 6
1900	24	100.0	-1	-4.2	36.63	99.9	+ .15	+ .4	.9731	131.4	+ .2907	+ 2
1901	25	101.2	-2	-8.0	36.64	99.9	+ .14	+ .4	.8260	111.6	+ .3478	+ 2
1902	26	108.3	-3	-11.5	36.69	100.1	+ .09	+ .2	1.0728	144.9	+ .1010	+ 8
1903	23	95.8			36.78	100.3			1.1738	158.5		

CUTTERS, WINDOW GLASS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 2 establishments, 1890-1899; 1 establishment, 1900; 2 establishments, 1901-1903.]

Av. 1890-99.	8	100.0			58.68	100.0	-0.68	-1.2	\$0.3899	100.0	+\$0.0932	+24
1890	8	100.0			58.00	98.8			.4321	110.8	+ .4511	+ 13
1891	8	100.0			58.36	99.5	- .36	- .6	.4153	106.5	+ .0679	+ 3
1892	8	100.0			58.36	99.5	- .36	- .6	.4197	107.6	+ .0635	+ 3
1893	8	100.0			58.00	98.8			.3971	101.8	+ .0861	+ 2
1894	8	100.0			58.80	100.2	- .80	-1.4	.4027	103.3	+ .0805	+ 3
1895	8	100.0			59.33	101.1	-1.33	-2.2	.3119	80.0	+ .1714	+ 4
1896	8	100.0			59.33	101.1	-1.33	-2.2	.3568	91.5	+ .1284	+ 5
1897	8	100.0			59.33	101.1	-1.33	-2.2	.3556	91.2	+ .1279	+ 5
1898	8	100.0			58.00	98.8			.3910	100.3	+ .0922	+ 3
1899	8	100.0			59.33	101.1	-1.33	-2.2	.4165	106.8	+ .0667	+ 3
1900	8	100.0			60.00	102.2	-2.00	-3.3	.3935	100.9	+ .0887	+ 2
1901	9	112.5	+1	+11.1	58.91	100.4	- .91	-1.5	.4448	114.1	+ .0384	+ 1
1902	9	112.5	+1	+11.1	58.91	100.4	- .91	-1.5	.4653	119.3	+ .0179	+ 1
1903	8	100.0			58.00	98.8			.4832	123.9		

FLATTENERS, WINDOW GLASS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0			68.48	100.0	-0.48	-0.7	\$0.4077	100.0	+\$0.1791	+43
1890	6	100.0			68.00	99.3			.4409	108.1	+ .1479	+23
1891	6	100.0			68.00	99.3			.4337	106.4	+ .1531	+23
1892	6	100.0			68.00	99.3			.4297	106.4	+ .1571	+23
1893	6	100.0			68.00	99.3			.4358	106.8	+ .1515	+24
1894	6	100.0			68.00	99.3			.3957	97.1	+ .1911	+49
1895	5	83.3	+1	+20.0	69.60	101.6	-1.60	-2.3	.3925	74.2	+ .2843	+84
1896	5	83.3	+1	+20.0	69.60	101.6	-1.60	-2.3	.3501	85.9	+ .2367	+87
1897	5	83.3	+1	+20.0	69.00	101.6	-1.60	-2.3	.3409	95.9	+ .1939	+70
1898	6	100.0			68.00	99.3			.4115	108.3	+ .1453	+22
1899	6	100.0			68.00	99.3			.4563	111.9	+ .1305	+28
1900	5	83.3	+1	+20.0	69.60	101.6	-1.60	-2.3	.5096	125.0	+ .0772	+15
1901	6	100.0			68.00	99.3			.4745	116.4	+ .1123	+21
1902	6	100.0			68.00	99.3			.5755	141.9	+ .0083	+1
1903	6	100.0			68.00	99.3			.5668	143.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

GLASS—Continued.

GAFFERS, FLINT GLASS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	39	100.0	+5	+12.8	49.40	100.0	+0.01	+0.02	\$0.5483	100.0	+\$0.0307	+5.6
1890	41	112.8	—	—	49.43	100.1	— .02	— .04	.5349	97.4	— .0450	— 8.4
1891	43	110.3	+1	+2.3	49.40	100.0	+ .01	+ .02	.5468	99.7	— .0322	— 5.9
1892	45	115.4	—1	—2.2	49.40	100.0	+ .01	+ .02	.5374	98.0	— .0416	— 7.7
1893	46	118.0	—2	—4.3	49.39	100.0	— .02	+ .04	.5402	98.5	— .0388	— 7.2
1894	37	94.9	+7	+18.9	49.41	100.0	—	—	.5478	99.9	— .0312	— 5.7
1895	36	92.3	+8	+22.2	49.39	100.0	+ .02	+ .01	.5549	101.0	— .0250	— 4.5
1896	35	89.7	+9	+25.7	49.40	100.0	+ .01	+ .02	.5571	101.6	— .0219	— 3.9
1897	35	89.7	+9	+25.7	49.40	100.0	+ .01	+ .02	.5574	101.7	— .0216	— 3.9
1898	36	92.3	+8	+22.2	49.39	100.0	+ .02	+ .04	.5540	101.0	— .0250	— 4.5
1899	35	89.7	+9	+25.7	49.40	100.0	+ .01	+ .02	.5538	101.0	— .0252	— 4.6
1900	36	92.3	+8	+22.2	49.39	100.0	+ .02	+ .01	.5596	101.9	— .0201	— 3.7
1901	39	100.0	+5	+12.8	49.38	100.0	+ .03	+ .1	.5671	103.4	— .0119	— 2.1
1902	43	110.3	+1	+2.3	49.42	100.0	— .01	— .02	.5774	105.3	— .0016	— .3
1903	44	112.8	—	—	49.41	100.0	—	—	.5790	105.6	—	—

GATHERERS, FLINT GLASS, Male.

[Data from 3 establishments.]

Av. 1890-99.	112	100.0	+122	+108.9	49.46	100.0	+0.02	+0.04	\$0.2799	100.0	+\$0.0462	+14.4
1890	141	125.9	+93	+66.0	49.48	100.0	—	—	.2696	96.3	— .0505	— 18.7
1891	140	125.0	+94	+67.1	49.46	100.0	+ .02	+ .04	.2719	97.1	— .0482	— 17.7
1892	108	96.4	+126	+116.7	49.45	100.0	+ .03	+ .1	.2735	97.7	— .0466	— 17.0
1893	103	92.0	+131	+127.2	49.45	100.0	+ .03	+ .1	.2754	98.4	— .0447	— 16.2
1894	91	83.9	+140	+148.9	49.46	100.0	+ .02	+ .04	.2827	101.0	— .0374	— 13.2
1895	103	92.0	+131	+127.2	49.47	100.0	+ .01	+ .02	.2793	99.8	— .0408	— 14.6
1896	103	92.0	+131	+127.2	49.47	100.0	+ .01	+ .02	.2811	100.4	— .0390	— 13.9
1897	103	92.0	+131	+127.2	49.47	100.0	+ .01	+ .02	.2878	102.8	— .0323	— 11.2
1898	112	100.0	+122	+108.9	49.46	100.0	+ .02	+ .04	.2868	102.5	— .0333	— 11.6
1899	116	103.6	+118	+101.7	49.47	100.0	+ .01	+ .02	.2907	103.9	— .0291	— 10.1
1900	151	134.8	+83	+55.0	49.47	100.0	+ .01	+ .02	.2915	104.1	— .0286	— 9.8
1901	164	146.4	+70	+42.7	49.47	100.0	+ .01	+ .02	.2918	105.3	— .0253	— 8.6
1902	181	161.6	+53	+29.3	49.48	100.0	—	—	.3070	109.7	— .0131	— 4.3
1903	234	208.9	—	—	49.48	100.0	—	—	.3201	114.4	—	—

GATHERERS, WINDOW GLASS, Male.

[Data from 2 establishments.]

Av. 1890-99.	25	100.0	—1	—4.0	36.68	100.0	—0.01	—0.03	\$0.4765	100.0	+\$0.3764	+79.0
1890	24	96.0	—	—	36.67	100.0	—	—	.4998	104.9	— .3531	+70.6
1891	24	116.0	—5	—17.2	36.69	100.0	— .02	— .1	.4686	98.3	— .3843	— 82.0
1892	27	108.0	—3	—11.1	36.67	100.0	—	—	.4922	103.3	— .3607	+73.3
1893	26	104.0	—2	—7.7	36.69	100.0	— .02	— .1	.4794	100.5	— .3735	+77.9
1894	26	104.0	—2	—7.7	36.69	100.0	— .02	— .1	.4418	92.7	— .4111	— 93.1
1895	24	96.0	—	—	36.67	100.0	—	—	.3660	76.8	— .4869	+133.0
1896	22	88.0	+2	+9.1	36.68	100.0	— .01	— .03	.4386	92.0	— .4143	— 91.5
1897	21	84.0	+3	+11.3	36.67	100.0	—	—	.4796	100.7	— .3733	+77.8
1898	27	108.0	—3	—11.1	36.67	100.0	—	—	.5495	115.3	— .3034	+55.2
1899	27	108.0	—3	—11.1	36.67	100.0	—	—	.5497	115.4	— .3032	+55.2
1900	22	88.0	+2	+9.1	36.68	100.0	— .01	— .03	.6387	134.0	— .2142	+33.5
1901	25	100.0	1	+4.0	36.68	100.0	— .01	— .03	.5637	122.5	— .2692	+46.1
1902	26	104.0	—2	—7.7	36.69	100.0	— .02	— .1	.7665	165.1	— .0664	+8.4
1903	24	96.0	—	—	36.67	100.0	—	—	.8529	179.0	—	—

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

GLASS—Continued.

GATHERING BOYS (BIT), Male.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	41.	100.0	-12	-29.3	51.26	100.0	-0.57	-1.1	\$0.1284	100.0	-\$0.0035	-2.7
1890.	41.	100.0	-12	-29.3	51.27	100.0	+ .56	+1.1	1280	99.7	-.0037	-2.8
1891.	41.	100.0	-12	-29.3	51.27	100.0	+ .56	+1.1	1280	99.7	-.0037	-2.8
1892.	43.	104.9	-14	-32.6	51.21	99.9	+ .62	+1.2	1276	99.4	-.0041	-3.2
1893.	41.	107.3	-15	-34.1	51.18	99.8	+ .65	+1.3	1274	99.2	-.0043	-3.4
1894.	41.	107.3	-15	-34.1	51.18	99.8	+ .65	+1.3	1274	99.2	-.0043	-3.4
1895.	51.	124.4	-22	-43.1	51.06	99.6	+ .77	+1.5	1263	98.4	-.0054	-4.2
1896.	49.	119.5	-20	-40.8	51.10	99.7	+ .73	+1.4	1266	98.6	-.0051	-4.0
1897.	34.	82.9	-5	-14.7	51.47	100.4	+ .36	+ .7	1298	101.1	-.0019	-1.5
1898.	33.	80.5	4	12.1	51.52	100.5	+ .31	+ .6	1301	101.3	-.0016	-1.3
1899.	29.	70.7			51.38	100.2	+ .45	+ .9	1323	103.0	-.0009	-.7
1900.	29.	70.7			51.83	101.1			1312	102.2	-.0005	-.4
1901.	29.	70.7			51.83	101.1			1312	102.2	-.0005	-.4
1902.	29.	70.7			51.83	101.1			1312	102.2	-.0005	-.4
1903.	29.	70.7			51.83	101.1			1317	102.6		

LABORERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	49	100.0	+4	+8.2	60.00	100.0			\$0.1135	100.0	-\$0.0131	-11.5
1890.	42	85.7	+11	+26.2	60.00	100.0			1138	93.2	-.0228	-20.1
1891.	42	85.7	+11	+26.2	60.00	100.0			1138	93.2	-.0228	-20.1
1892.	42	85.7	+11	+26.2	60.00	100.0			1138	93.2	-.0228	-20.1
1893.	42	85.7	+11	+26.2	60.00	100.0			1138	93.2	-.0228	-20.1
1894.	33	71.4	+18	+51.1	60.00	100.0			1321	92.1	-.0243	-21.9
1895.	38	77.6	-15	-39.5	60.00	100.0			1299	89.8	-.0277	-24.5
1896.	45	91.8	-8	-17.8	60.00	100.0			1293	90.1	-.0273	-24.2
1897.	50	102.0	7	+6.0	60.00	100.0			1340	93.4	-.0228	-20.1
1898.	52	106.1	26	+62.0	60.00	100.0			1332	92.8	-.0234	-20.6
1899.	79	161.2	26	+62.0	60.00	100.0			1332	92.8	-.0234	-20.6
1900.	84	175.5	33	+83.4	60.00	100.0			1343	93.6	-.0224	-20.0
1901.	76	153.1	3	+6.1	60.00	100.0			1302	97.7	-.0163	-14.4
1902.	61	124.5			60.00	100.0			1406	98.0	-.0060	-5.3
1903.	61	124.5			60.00	100.0			1366	109.1		

LEERSMEN, Male.

[Data from 1 establishment.]

Av. 1890-99.	57	100.0	-1	-1.7	180.0	100.0	0.50	0.5	\$0.1790	100.0	-\$0.0025	-1.4
1890.	62	108.8	5	+8.3	180.0	100.0	-.08	-.6	1797	100.4	-.0018	-1.0
1891.	62	108.8	5	+8.3	180.0	100.0	-.08	-.6	1797	100.4	-.0018	-1.0
1892.	63	110.0	6	+10.0	180.0	100.0	-.11	-.7	1797	100.4	-.0018	-1.0
1893.	62	108.8	5	+8.3	180.0	100.0	-.08	-.6	1796	99.8	-.0019	-1.1
1894.	59	87.7	9	+15.0	180.0	100.0	-.09	-.6	1789	99.9	-.0019	-1.1
1895.	61	91.0	6	+10.0	180.0	100.0	-.04	-.3	1791	100.1	-.0017	-.9
1896.	57	93.0	6	+10.0	180.0	100.0	-.04	-.3	1787	99.8	-.0018	-1.0
1897.	61	94.7	7	+12.2	180.0	100.0	-.05	-.4	1780	99.4	-.0023	-1.3
1898.	57	96.5	4	+6.7	180.0	100.0	-.08	-.5	1788	99.9	-.0017	-.9
1899.	51	89.5	8	+13.7	180.0	100.0	-.04	-.3	1787	99.8	-.0018	-1.0
1900.	57	100.0	2	+3.3	180.0	100.0	-.04	-.3	1775	98.2	-.0088	-8.0
1901.	67	117.5	4	+6.3	180.0	100.0	-.09	-.5	1788	99.9	-.0017	-.9
1902.	61	107.0	2	+3.3	180.0	100.0	-.04	-.3	1809	101.1	-.0006	-.3
1903.	59	103.5			180.0	100.0			1845	103.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

GLASS—Concluded.

PACKERS, Male.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	100	100.0	-9	-9.0	55.45	100.0	-0.26	-0.5	\$0.1857	100.0	+\$0.0117	+6.3
1890	102	102.0	-11	-10.8	56.01	101.0	-.82	-1.4	.1854	99.8	+.0120	+6.5
1891	103	103.0	-12	-11.7	55.47	100.0	-.28	-.5	.1850	99.6	+.0124	+6.7
1892	107	107.0	-16	-15.0	55.50	100.1	-.31	-.6	.1855	100.4	+.0109	+5.8
1893	108	108.0	-17	-15.7	55.44	100.0	-.25	-.5	.1870	100.7	+.0104	+5.6
1894	98	98.0	-7	-7.1	55.63	100.3	-.44	-.8	.1851	99.7	+.0123	+6.6
1895	85	85.0	+6	+7.1	54.53	98.3	+.66	+1.2	.1906	102.6	+.0068	+3.6
1896	88	88.0	+3	+3.4	55.03	99.2	+.16	+3	.1871	100.8	+.0103	+5.5
1897	102	102.0	-11	-10.8	55.70	100.5	-.51	-.9	.1829	98.5	+.0145	+7.9
1898	100	100.0	-9	-9.0	55.54	100.2	-.35	-.6	.1841	99.1	+.0133	+7.2
1899	106	106.0	-15	-14.2	55.69	100.4	-.50	-.9	.1829	98.5	+.0145	+7.9
1900	103	103.0	-12	-11.7	55.85	100.7	-.66	-1.2	.1823	98.2	+.0151	+8.3
1901	102	102.0	-11	-10.8	55.77	100.6	-.58	-1.0	.1875	101.0	+.0099	+5.3
1902	100	100.0	-9	-9.0	55.79	100.6	-.60	-1.1	.1864	100.4	+.0110	+5.9
1903	91	91.0			55.19	99.5			.1974	106.3		

TEASERS, Male.

[Data from 9 establishments.]

Av. 1890-99.	59	100.0	-3	-5.1	79.13	100.0	-0.25	-0.3	\$0.1648	100.0	+\$0.0054	+3.3
1890	60	101.7	-4	-6.7	79.22	100.1	-.34	-.4	.1703	103.3	+.0001	-.1
1891	64	108.5	-8	-12.5	79.52	100.5	-.64	-.8	.1673	101.5	+.0029	+1.7
1892	64	108.5	-8	-12.5	79.52	100.5	-.64	-.8	.1673	101.5	+.0029	+1.7
1893	63	106.8	-7	-11.1	79.44	100.4	-.56	-.7	.1686	102.3	+.0016	+.9
1894	57	96.6	-1	-1.8	78.96	99.8	-.08	-.1	.1653	100.3	+.0049	+3.0
1895	58	98.3	-2	-3.4	79.05	99.9	-.17	-.2	.1649	100.1	+.0053	+3.2
1896	56	94.9			78.88	99.7			.1635	99.2	+.0067	+4.1
1897	57	96.6	-1	-1.8	78.96	99.8	-.08	-.1	.1626	98.7	+.0076	+4.7
1898	53	89.8	+3	+5.7	78.58	99.3	+.30	+.4	.1570	95.3	+.0132	+8.4
1899	59	100.0	-3	-5.1	79.14	100.0	-.26	-.3	.1609	97.6	+.0093	+5.8
1900	57	96.6	-1	-1.8	78.96	99.8	-.08	-.1	.1636	99.3	+.0066	+4.0
1901	57	96.6	-1	-1.8	78.96	99.8	-.08	-.1	.1636	99.3	+.0066	+4.0
1902	59	100.0	-3	-5.1	79.14	100.0	-.26	-.3	.1621	98.5	+.0078	+4.8
1903	56	94.9			78.88	99.7			.1702	103.3		

GLASS, PLATE.

CASTERS, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	50	(a)	-6	-12.0	48.00	(a)			\$0.2250	(a)	+\$0.0264	+11.7
1898	50	(a)	-6	-12.0	48.00	(a)			.2250	(a)	+.0264	+11.7
1899	46	(a)	-2	-4.3	48.00	(a)			.2393	(a)	+.0131	+5.5
1900	46	(a)	-2	-4.3	48.00	(a)			.2393	(a)	+.0131	+5.5
1901	44	(a)			48.00	(a)			.2514	(a)		
1902	44	(a)			48.00	(a)			.2514	(a)		
1903	44	(a)			48.00	(a)			.2514	(a)		

CUTTERS, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	6	(a)	+3	+50.0	64.00	(a)	+0.67	+1.0	\$0.2131	(a)	+\$0.0169	+7.9
1898	9	(a)			64.00	(a)	+.67	+1.0	.1934	(a)	+.0028	+1.4
1899	9	(a)			64.00	(a)	+.67	+1.0	.2045	(a)	+.0083	+4.1
1900	10	(a)	-1	-10.0	64.20	(a)	+.47	+.7	.1936	(a)	+.0026	+1.3
1901	9	(a)			64.00	(a)	+.67	+1.0	.1981	(a)	+.0022	+1.1
1902	9	(a)			64.67	(a)			.1962	(a)		
1903	9	(a)			64.67	(a)						

a Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

GLASS, PLATE—Continued.

DRAWERS, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	15	(a)	-7	-46.7	60.00	(a)			\$0.1610	(a)	-\$0.0140	-8.7
1899	15	(a)	-7	-46.7	60.00	(a)			.1787	(a)	-.0037	-2.3
1900	21	(a)	-1	-4.8	60.00	(a)			.1862	(a)	-.0112	-6.3
1901	39	(a)	-8	-26.7	60.00	(a)			.1788	(a)	-.0088	-5.5
1902	28	(a)	-6	-21.4	60.00	(a)			.1825	(a)	-.0075	-4.6
1903	22	(a)			60.00	(a)			.1750	(a)		

GRINDERS, Male.

[No data, 1890-1897; data from 2 establishments, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	87	(a)	-20	-23.0	62.59	(a)	-8.37	+13.4	\$0.1910	(a)	-\$0.0172	-9.0
1899	95	(a)	-12	-12.6	63.13	(a)	+7.83	+12.4	.1906	(a)	-.0176	-9.2
1900	91	(a)	-13	-13.8	63.26	(a)	-7.70	+12.2	.1968	(a)	-.0114	-5.8
1901	111	(a)	-6	-5.3	64.22	(a)	+6.74	+10.5	.1951	(a)	-.0131	-6.7
1902	125	(a)	-16	-13.0	70.71	(a)	-25	+4	.2002	(a)	+.0080	+4.2
1903	107	(a)			70.96	(a)			.2082	(a)		

LAYERS, POLISHING ROOM, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	20	(a)	-21	-105.0	63.00	(a)			\$0.1922	(a)	+\$0.0146	+7.6
1899	53	(a)	-8	-21.2	69.00	(a)			.2067	(a)	-.0085	-4.4
1900	37	(a)	+4	+10.8	69.00	(a)			.1968	(a)	-.0080	-4.1
1901	32	(a)	+9	+28.1	69.00	(a)			.2043	(a)	-.0015	-.7
1902	40	(a)	+1	+2.5	69.00	(a)			.2049	(a)	-.0009	-.5
1903	41	(a)			63.00	(a)			.2058	(a)		

MELTERS, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	3	(a)	-1	-33.3	70.00	(a)			\$0.2137	(a)		
1899	2	(a)	+2	+100.0	70.00	(a)			.2137	(a)		
1900	2	(a)	-2	-100.0	70.00	(a)			.2137	(a)		
1901	4	(a)			70.00	(a)			.2137	(a)		
1902	4	(a)			70.00	(a)			.2137	(a)		
1903	4	(a)			70.00	(a)			.2137	(a)		

POLISHERS, Male.

[No data, 1890-1897; data from 2 establishments, 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	36	(a)	-1	-2.8	61.00	(a)	-10.43	+17.1	\$0.1979	(a)	-\$0.0278	-14.0
1899	30	(a)	-2	-5.1	61.00	(a)	-9.81	+15.9	.1908	(a)	-.0227	-11.4
1900	16	(a)	-1	-2.8	61.70	(a)	-9.93	+16.1	.1841	(a)	-.0160	-8.2
1901	34	(a)	+5	+8.8	61.00	(a)	-10.37	+17.0	.1872	(a)	-.0191	-10.2
1902	36	(a)	+1	+2.8	71.67	(a)	-24	+3	.1697	(a)	-.0016	-.8
1903	37	(a)			71.40	(a)			.1681	(a)		

a Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

GLASS, PLATE—Concluded.

TABLEMEN, Male.

[No data, 1890-1897; data from 1 establishment, 1898-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	22	(a)	+ 8	36.4	60.00	(a)	.....	.....	\$0.1627	(a)	-\$0.0016	+1.0
1899	19	(a)	+ 11	57.9	60.00	(a)	.....	.....	.1871	(a)	- .0028	- 1.5
1900	46	(a)	+ 16	34.8	60.00	(a)	.....	.....	.1878	(a)	- .0035	- 1.9
1901	36	(a)	- 6	16.7	60.00	(a)	.....	.....	.1863	(a)	- .0020	- 1.1
1902	20	(a)	+ 10	50.0	60.00	(a)	.....	.....	.1873	(a)	- .0030	- 1.6
1903	39	(a)	.....	.....	60.00	(a)	.....	.....	.1845	(a)	.....	.....

WAGON MEN, Male.

[No data, 1890-1897; data from 1 establishment 1898-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1898	24	(a)	- 2	- 8.3	60.00	(a)	.....	.....	\$0.1671	(a)	+\$0.0277	+ 16.6
1899	20	(a)	+ 2	+ 10.0	60.00	(a)	.....	.....	.1895	(a)	- .0053	- 2.8
1900	23	(a)	- 1	- 4.3	60.00	(a)	.....	.....	.1889	(a)	- .0059	- 3.1
1901	36	(a)	- 14	- 38.9	60.00	(a)	.....	.....	.1853	(a)	+ .0095	+ 5.1
1902	18	(a)	+ 4	+ 22.2	60.00	(a)	.....	.....	.1886	(a)	- .0062	- 3.3
1903	22	(a)	.....	.....	60.00	(a)	.....	.....	.1948	(a)	.....	.....

HARNESS.

COLLAR MAKERS, Male.

[Data from 17 establishments.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	144	100.0	+17	+11.8	59.28	100.0	-0.99	-1.7	\$0.2084	100.0	-\$0.0318	+15.3
1890	133	92.4	+28	+21.1	59.51	100.4	-1.22	-2.1	.2100	100.8	- .0302	+14.4
1891	131	91.0	+30	+22.9	59.50	100.4	-1.21	-2.0	.2093	100.4	- .0309	+11.8
1892	133	92.4	+28	+21.1	59.37	100.2	-1.08	-1.8	.2113	101.4	- .0289	+13.7
1893	138	95.8	+23	+16.7	59.13	99.7	- .84	-1.4	.2099	100.7	- .0303	+14.4
1894	125	88.8	+26	+19.3	59.21	99.9	- .92	-1.6	.2085	100.0	- .0317	+15.2
1895	117	82.1	+14	+ 9.5	59.27	100.0	- .98	-1.7	.2054	98.6	- .0348	+16.9
1896	158	109.7	+ 3	+ 1.9	59.23	99.9	- .91	-1.6	.2080	99.8	- .0322	+15.5
1897	156	108.3	+ 5	+ 3.2	59.29	100.0	-1.00	-1.7	.2067	99.2	- .0335	+16.2
1898	157	109.0	+ 4	+ 2.5	59.26	100.0	- .97	-1.6	.2068	99.2	- .0334	+16.2
1899	119	83.5	+12	+ 8.1	58.98	99.5	- .69	-1.2	.2083	100.0	- .0319	+15.3
1900	166	115.3	- 5	- 3.0	59.08	99.7	- .79	-1.3	.2127	102.1	- .0275	+12.9
1901	160	111.1	- 1	- 0.6	58.94	99.4	- .65	-1.1	.2243	107.6	- .0159	- 7.1
1902	166	115.3	- 5	- 3.0	58.78	99.2	- .49	- .8	.2277	109.3	- .0125	- 5.5
1903	161	111.8	.....	.....	58.29	98.8	.....	.....	.2102	115.5	.....	.....

CUTTERS, Male.

[Data from 21 establishments.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	87	100.0	+19	+21.8	58.88	100.0	-1.31	-2.2	\$0.2574	100.0	+\$0.0479	+18.6
1890	80	92.0	+26	+32.5	59.00	100.2	-1.43	-2.4	.2598	100.9	- .0455	+17.5
1891	81	93.1	+25	+30.9	59.02	100.2	-1.45	-2.5	.2585	100.4	- .0468	+18.1
1892	85	97.7	+21	+21.7	59.06	100.3	-1.49	-2.5	.2564	99.6	- .0489	+19.1
1893	85	97.7	+21	+24.7	58.86	100.0	-1.29	-2.2	.2583	100.3	- .0470	+18.2
1894	86	98.9	+20	+23.3	58.81	99.9	-1.21	-2.1	.2561	99.5	- .0492	+19.2
1895	83	95.4	+23	+27.7	58.83	99.9	-1.26	-2.1	.2587	100.5	- .0466	+18.0
1896	88	101.1	+18	+20.5	58.84	99.9	-1.27	-2.2	.2566	99.7	- .0487	+19.0
1897	91	104.6	+15	+16.5	58.88	100.0	-1.31	-2.2	.2546	98.9	- .0507	+19.9
1898	93	106.9	+13	+14.0	58.78	99.8	-1.21	-2.1	.2577	100.1	- .0476	+18.5
1899	102	117.2	+ 4	+ 3.9	58.70	99.7	-1.13	-1.9	.2572	99.9	- .0481	+18.7
1900	101	116.1	+ 5	+ 5.0	58.84	99.9	-1.27	-2.2	.2609	101.4	- .0441	+17.0
1901	101	116.1	+ 5	+ 5.0	58.70	99.7	-1.13	-1.9	.2685	104.3	- .0368	+13.7
1902	108	124.1	- 2	- 1.9	58.11	98.7	- .54	- .9	.2728	106.0	- .0325	+11.9
1903	106	121.8	.....	.....	57.57	97.8	.....	.....	.3053	118.6	.....	.....

a Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

HARNESS—Continued.

FITTERS AND FINISHERS, Male.

[Data from 14 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per- cent.			Num- ber.	Per- cent.			Amount.	Per- cent.
Av. 1890-99.	110	100.0	+68	+61.8	58.88	100.0	-2.48	-1.2	\$0.2124	100.0	+\$0.0520	+24.5
1890	96	87.3	+82	+85.4	59.38	100.8	-2.98	-5.0	.2122	99.9	+.0522	+24.5
1891	104	94.5	+74	+71.2	59.40	100.9	-3.00	-5.1	.2164	101.9	+.0489	+23.0
1892	100	90.9	+78	+78.0	59.42	100.9	-3.02	-5.1	.2152	101.3	+.0492	+23.5
1893	97	88.2	+81	+83.5	59.39	100.9	-2.99	-5.0	.2137	100.6	+.0507	+23.9
1894	94	85.5	+84	+89.4	59.22	100.6	-2.82	-4.8	.2088	98.3	+.0556	+26.2
1895	109	99.1	+69	+63.3	58.51	99.4	-2.11	-3.6	.2091	98.4	+.0558	+26.4
1896	122	110.9	+56	+45.9	58.26	98.9	-1.86	-3.2	.2012	96.1	+.0622	+29.3
1897	123	111.8	+55	+44.7	58.42	99.2	-2.02	-3.5	.2068	97.4	+.0576	+27.0
1898	119	108.2	+59	+49.6	58.58	99.5	-2.18	-3.7	.2168	102.1	+.0476	+22.0
1899	130	127.3	+48	+27.1	58.17	98.8	-1.77	-3.0	.2203	103.7	+.0441	+20.9
1900	133	130.9	+45	+33.8	58.33	99.1	-1.95	-3.3	.2309	104.0	+.0455	+19.5
1901	143	130.0	+35	+21.5	57.99	98.5	-1.69	-2.6	.2344	110.4	+.0399	+18.8
1902	167	151.8	+11	+6.6	57.58	97.8	-1.18	-2.0	.2334	114.6	+.0210	+9.9
1903	178	161.8			56.40	95.8			.2644	124.5		

HARNESS MAKERS, Male.

[Data from 14 establishments.]

Av. 1890-99.	215	100.0	+71	+33.0	59.54	100.0	-0.32	-0.5	\$0.2116	100.0	-\$0.0125	-5.9
1890	156	89.8	+93	+48.2	59.80	100.4	-.58	-1.0	.2098	99.1	+.0143	+6.8
1891	197	91.6	+89	+45.2	59.80	100.4	-.58	-1.0	.2108	99.6	+.0128	+6.1
1892	188	87.4	+98	+52.1	59.59	100.1	-.57	-1.0	.2112	99.8	+.0129	+6.4
1893	194	90.2	+92	+47.4	59.50	99.9	-.58	-1.0	.2120	100.7	+.0111	+5.2
1894	191	88.8	+95	+49.7	59.49	99.9	-.57	-1.0	.2099	99.2	+.0112	+5.8
1895	209	97.2	+77	+36.8	59.41	99.8	-.59	-1.0	.2089	98.7	+.0152	+7.2
1896	226	105.1	+60	+26.5	59.39	99.7	-.57	-1.0	.2106	99.5	+.0155	+7.4
1897	238	110.7	+48	+20.2	59.40	99.8	-.58	-1.0	.2114	99.9	+.0127	+6.0
1898	248	114.3	+38	+15.3	59.45	99.8	-.58	-1.0	.2160	102.1	+.0081	+3.8
1899	268	124.7	+18	+6.7	59.55	100.0	-.33	-.6	.2145	101.4	+.0098	+4.6
1900	278	129.3	+8	+3.5	59.47	100.0	-.31	-.5	.2156	101.9	+.0085	+4.0
1901	276	128.4	+10	+3.6	59.42	99.8	-.29	-.5	.2162	102.2	+.0079	+3.7
1902	276	128.4	+10	+3.6	59.47	99.4	+.05	+1.1	.2173	102.7	+.0068	+3.2
1903	286	133.0			59.22	99.0			.2241	105.9		

STITCHERS, HAND, Male.

[Data from 9 establishments.]

Av. 1890-99.	34	100.0	+19	+56.4	59.86	100.0	+0.47	+0.8	\$0.1978	100.0	-\$0.0319	-16.1
1890	24	89.6	+23	+59.4	59.79	100.0	+0.46	+0.8	.1988	100.5	+.0329	+16.6
1891	24	89.6	+22	+59.4	59.79	100.0	+0.46	+0.8	.1988	100.5	+.0329	+16.6
1892	31	96.9	+20	+61.3	59.77	100.0	+0.48	+0.9	.2005	101.4	+.0292	+14.8
1893	35	103.1	+18	+47.7	59.82	100.0	+0.49	+0.9	.2012	101.7	+.0285	+14.4
1894	33	100.1	+18	+47.7	59.83	99.7	+0.51	+1.0	.1941	98.1	+.0356	+18.0
1895	32	100.0	+19	+49.4	59.84	100.0	+0.48	+0.9	.1927	97.1	+.0370	+19.2
1896	30	93.8	+21	+59.0	59.80	100.0	+0.47	+0.9	.1955	98.8	+.0342	+17.5
1897	31	98.9	+20	+61.3	59.81	100.0	+0.48	+0.9	.2003	101.8	+.0284	+14.4
1898	36	112.5	+15	+41.7	59.85	100.1	+0.50	+1.0	.1980	100.1	+.0317	+16.0
1899	40	125.0	+17	+25.5	59.85	100.1	+0.52	+1.1	.1957	99.4	+.0330	+16.8
1900	45	131.4	+8	+18.6	59.86	100.1	+0.53	+1.2	.1980	100.1	+.0317	+16.0
1901	49	143.1	+2	+4.1	59.82	100.1	+0.51	+1.0	.2003	101.3	+.0284	+14.7
1902	52	162.5	+1	+1.9	59.85	100.1	+0.52	+1.1	.2154	108.9	+.0143	+7.3
1903	51	159.4			59.83	99.2			.2267	116.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

HARNESSES—Concluded.

STITCHERS, MACHINE, Male.

[Data from 20 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	100	100.0	+45	+45.0	59.17	100.0	-1.43	-2.4	\$0.2269	100.0	+\$0.0823	+14.2
1890.	94	91.0	+51	+54.8	59.47	100.5	-1.73	-2.9	.2267	99.9	+.0325	+14.3
1891.	90	90.0	+55	+61.1	59.43	100.4	-1.69	-2.8	.2288	100.8	+.0304	+13.3
1892.	99	99.0	+46	+46.5	59.12	99.9	-1.88	-2.8	.2264	99.8	+.0328	+14.5
1893.	90	90.0	+55	+61.1	59.04	99.8	-1.80	-2.2	.2320	102.2	+.0272	+11.7
1894.	97	97.0	+48	+49.5	59.05	99.8	-1.31	-2.2	.2249	99.1	+.0343	+15.3
1895.	102	102.0	+43	+42.2	59.07	99.8	-1.83	-2.3	.2207	97.3	+.0385	+17.4
1896.	105	105.0	+40	+38.1	59.14	99.9	-1.40	-2.4	.2225	98.1	+.0367	+16.5
1897.	103	103.0	+42	+40.8	59.08	99.8	-1.84	-2.3	.2249	99.6	+.0333	+14.7
1898.	109	109.0	+36	+33.0	59.12	99.9	-1.38	-2.3	.2275	100.3	+.0317	+13.9
1899.	108	108.0	+37	+34.3	59.13	99.9	-1.39	-2.4	.2336	102.9	+.0257	+11.0
1900.	131	131.0	+14	+10.7	59.11	99.9	-1.37	-2.3	.2327	102.6	+.0255	+11.4
1901.	132	132.0	+13	+9.8	58.85	99.5	-1.11	-1.9	.2449	107.9	+.0143	+5.8
1902.	132	132.0	+13	+9.8	58.45	98.8	-.71	-1.2	.2506	110.4	+.0086	+3.4
1903.	115	115.0			57.74	97.6			.2592	114.2		

HATS, FUR.

BLOCKERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	52	100.0	+10	+19.2	58.40	100.0	-4.64	-7.9	\$0.3036	100.0	+\$0.0340	+11.2
1890.	39	75.0	+23	+59.0	59.46	101.8	-5.70	-9.6	.3229	106.4	+.0147	+4.6
1891.	42	80.8	+20	+47.6	59.36	101.6	-5.60	-9.4	.2972	97.9	+.0404	+13.6
1892.	45	86.5	+17	+37.8	58.82	100.7	-5.66	-8.6	.3045	100.3	+.0331	+10.9
1893.	48	92.3	+14	+29.2	59.29	101.5	-5.53	-9.3	.2820	92.9	+.0556	+19.7
1894.	59	113.5	+3	+5.1	58.93	100.9	-5.17	-8.8	.3001	98.8	+.0375	+12.5
1895.	51	98.1	+11	+21.6	58.96	101.0	-5.20	-8.8	.2791	91.9	+.0585	+21.0
1896.	50	96.2	+12	+24.0	59.30	101.5	-5.54	-9.3	.2836	93.4	+.0540	+19.0
1897.	53	101.9	+9	+17.0	59.28	101.5	-5.52	-9.3	.2900	95.5	+.0476	+16.4
1898.	60	115.4	+2	+3.3	58.20	94.5	-1.41	-2.6	.3340	110.0	+.0036	+1.1
1899.	70	134.6	-8	-11.4	55.40	94.9	-1.64	-3.0	.3125	112.8	+.0050	+1.5
1900.	58	111.5	+4	+6.9	55.33	94.7	-1.57	-2.8	.3150	113.6	+.0074	+2.1
1901.	63	121.2	-1	-1.6	55.24	94.6	-1.48	-2.7	.3246	108.9	+.0130	+4.0
1902.	61	117.3	-1	-1.6	54.44	93.2	-.68	-1.2	.3435	113.2	+.0061	+1.8
1903.	62	119.2			55.76	92.1			.3376	111.2		

COLORERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	24	100.0	+7	+29.2	59.61	100.0	-5.56	-9.4	\$0.1752	100.0	+\$0.0212	+12.1
1890.	24	100.0	+7	+29.2	59.04	100.0	-5.56	-9.4	.1798	102.7	+.0165	+9.2
1891.	27	112.5	-4	-11.8	59.26	100.4	-5.78	-9.8	.1719	98.1	+.0245	+14.2
1892.	23	95.8	+8	+34.8	59.26	100.4	-5.78	-9.8	.1678	95.8	+.0286	+17.0
1893.	31	129.2			59.10	100.1	-5.62	-9.5	.1689	96.4	+.0275	+16.3
1894.	32	133.3	-1	-3.1	58.66	99.4	-5.18	-8.8	.1733	98.9	+.0231	+13.3
1895.	19	79.2	+12	+63.2	58.81	99.7	-5.36	-9.1	.1763	100.6	+.0201	+11.4
1896.	19	79.2	-12	-63.2	59.05	100.0	-5.57	-9.4	.1833	106.3	+.0101	+5.4
1897.	19	79.2	-12	-63.2	59.05	100.0	-5.57	-9.4	.1776	101.4	+.0188	+10.6
1898.	21	87.5	+10	+47.6	59.10	100.1	-5.62	-9.5	.1766	100.8	+.0198	+11.2
1899.	25	104.2	+6	+24.0	59.04	100.0	-5.56	-9.4	.1754	99.0	+.0270	+13.3
1900.	21	87.5	-10	-47.6	58.86	99.7	-5.38	-9.1	.1759	100.4	+.0265	+11.7
1901.	27	112.5	+4	+14.8	58.74	99.5	-5.26	-9.0	.1762	100.6	+.0292	+11.5
1902.	28	116.7	+3	+10.7	54.46	92.2	-.98	-1.8	.1920	109.6	+.0044	+2.3
1903.	31	129.2			53.48	90.6			.1974	112.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

HATS, FUR—Continued.

CONERS, Male.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	22	100.0	+ 9	+ 10.9	59.09	100.0	-5.41	-9.2	\$0.2045	100.0	-\$0.0229	-11.2
1890	19	86.4	+12	+63.2	59.42	100.6	-5.74	-9.7	2.69	99.7	+	.025
1891	22	100.0	+ 9	+ 40.9	59.50	100.7	-5.82	-9.8	2.64	99.5	+	.063
1892	22	100.0	+ 9	+ 40.9	59.50	100.7	-5.82	-9.8	2.64	99.5	+	.063
1893	21	100.1	+ 7	+ 29.2	59.33	100.4	-5.65	-9.5	2.63	100.9	+	.062
1894	21	101.5	+ 8	+ 31.8	59.30	100.4	-5.62	-9.5	2.629	99.2	+	.056
1895	19	86.4	+12	+63.2	59.16	100.1	-5.48	-9.3	2.626	99.6	+	.029
1896	19	86.4	+12	+63.2	59.42	100.6	-5.74	-9.7	2.626	99.6	+	.029
1897	22	100.0	+ 9	+ 40.9	58.86	99.6	-5.18	-8.8	2.129	94.3	+	.078
1898	21	101.5	+ 8	+ 31.8	58.91	99.7	-5.23	-8.9	2.172	105.2	+	.043
1899	26	118.2	+ 5	+ 19.2	57.50	97.3	-3.82	-6.6	2.045	99.9	+	.042
1900	30	136.4	+ 1	+ 3.5	57.50	97.3	-3.69	-6.4	2.100	102.7	+	.055
1901	31	151.5	+ 5	+ 8.8	57.53	97.4	-3.85	-6.7	2.108	103.1	+	.057
1902	31	140.9			51.71	92.6	-1.06	-1.9	2.156	120.1	+	.029
1903	31	140.9			53.0	90.8			2.065	130.3		

CURLERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	20	100.0	- 7	- 33.3	55.12	100.0	- 6.33	- 6.6	\$0.3805	100.0	-\$0.0277	- 7.3
1890	16	76.2	-12	- 55.0	55.19	100.1	- 6.40	- 6.7	4.220	110.9	+	.018
1891	16	76.2	-12	- 55.0	55.31	100.3	- 6.52	- 6.9	4.416	116.8	+	.064
1892	17	81.0	-11	- 61.7	55.18	100.1	- 6.39	- 6.7	4.300	113.0	+	.021
1893	18	89.7	-10	- 55.6	55.22	100.2	- 6.43	- 6.8	3.861	101.5	+	.021
1894	23	109.5	+ 5	+ 21.7	55.09	99.9	- 6.30	- 6.5	3.746	98.1	+	.016
1895	20	95.2	- 8	- 36.0	55.00	99.9	- 6.26	- 6.5	3.815	93.2	+	.037
1896	22	101.8	- 6	- 27.3	55.14	100.0	- 6.35	- 6.6	3.547	93.2	+	.055
1897	21	111.3	- 4	- 16.7	55.04	99.9	- 6.25	- 6.5	3.442	90.5	+	.050
1898	25	122.5	+ 5	+ 21.7	55.15	100.1	- 6.38	- 6.7	3.506	92.1	+	.056
1899	30	142.9	- 2	- 6.7	51.85	99.5	- 6.01	- 6.1	3.438	90.4	+	.044
1900	26	125.8	- 2	- 7.7	51.88	99.6	- 6.09	- 6.2	3.430	90.1	+	.032
1901	25	125.8	- 2	- 7.7	55.04	99.9	- 6.25	- 6.5	3.875	101.8	+	.027
1902	25	100.0	- 7	- 33.3	51.75	99.3	- 6.03	- 6.1	4.032	106.5	+	.030
1903	28	135.0			51.79	99.4			4.082	107.3		

FEEDERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0	+ 6	+ 100.0	56.95	100.0	- 1.68	- 3.0	\$0.6857	100.0	-\$0.0168	- 2.4
1890	4	66.7	+ 8	+ 20.0	57.50	101.0	- 2.25	- 3.9	.6788	91.9	+	.0237
1891	5	83.3	+ 7	+ 10.0	57.60	100.1	- 1.75	- 3.1	.6828	96.6	+	.0197
1892	5	83.3	+ 7	+ 10.0	57.60	100.1	- 1.75	- 3.1	.6771	90.3	+	.0231
1893	5	83.3	+ 7	+ 10.0	57.00	100.1	- 1.75	- 3.1	.6792	92.4	+	.0233
1894	6	100.0	+ 6	+ 100.0	56.83	99.8	- 1.58	- 2.8	.6866	99.9	+	.0109
1895	5	83.3	+ 7	+ 10.0	57.00	100.1	- 1.75	- 3.1	.6882	102.9	+	.0133
1896	4	66.7	+ 8	+ 20.0	57.50	101.0	- 2.25	- 3.9	.6833	97.2	+	.0192
1897	8	133.3	+ 1	+ 50.0	56.50	99.2	- 1.25	- 2.2	.6950	121.9	+	.0145
1898	5	83.3	+ 7	+ 10.0	57.00	100.1	- 1.75	- 3.1	.6880	100.8	+	.0161
1899	11	183.3	+ 1	+ 50.0	56.00	98.1	- 1.75	- 3.1	.6880	102.7	+	.0145
1900	12	200.0			56.17	98.7	- 1.92	- 3.6	.6870	101.5	+	.0155
1901	15	250.0	+ 1	+ 7.7	56.51	98.9	- 1.06	- 1.9	.6860	100.4	+	.0165
1902	12	200.0			56.50	97.0			.6927	119.8	+	.0062
1903	12	200.0			56.29	97.0			.6925	119.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

HATS, FUR—Continued.

FEEDERS, Female.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1892, 1894, 1897-1903; 4 establishments, 1893, 1895, 1896.]

Year.	Employees.			Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
						Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	19	100.0	+3	59.65	100.0	-6.42	-10.8	\$0.0926	100.0	+\$0.0144	+15.6
1890	17	89.5	+5	59.88	100.4	-6.65	-11.1	.0933	100.8	+.0137	+14.7
1891	20	105.3	+2	59.90	100.4	-6.67	-11.1	.0918	99.1	+.0152	+16.6
1892	20	105.3	+2	59.90	100.4	-6.67	-11.1	.0918	99.1	+.0152	+16.6
1893	20	105.3	+2	59.71	100.1	-6.48	-10.9	.0918	99.1	+.0152	+16.6
1894	21	110.5	+1	59.90	100.4	-6.67	-11.1	.0914	98.7	+.0156	+17.1
1895	16	84.2	+6	59.65	100.0	-6.42	-10.8	.0933	100.8	+.0137	+14.7
1896	17	89.5	+5	59.67	100.0	-6.44	-10.8	.0922	99.6	+.0148	+16.1
1897	17	89.5	+5	59.88	100.4	-6.65	-11.1	.0928	100.2	+.0142	+15.3
1898	20	105.3	+2	59.85	100.3	-6.62	-11.1	.0928	100.2	+.0142	+15.3
1899	18	94.7	+4	58.17	97.5	-4.94	-8.5	.0950	102.6	+.0120	+12.6
1900	17	89.5	+5	58.35	97.8	-5.12	-8.8	.0942	101.7	+.0128	+13.6
1901	20	105.3	+2	58.60	98.2	-5.37	-9.2	.0925	99.9	+.0145	+15.7
1902	23	121.1	-1	51.39	91.2	-1.16	-2.1	.1047	113.1	+.0023	+2.2
1903	22	115.8		53.23	89.2			.1070	115.6		

FINISHERS, Male.

[Data from 6 establishments.]

Av. 1890-99.	277	100.0	+231	+83.4	56.50	100.0	-2.44	-2.1	\$0.2585	100.0	+\$0.0427	+16.8
1890	293	105.8	+215	+73.4	56.73	100.4	-2.67	-4.7	.2617	103.2	+.0345	+13.2
1891	265	95.7	+243	+91.7	56.08	99.3	-2.02	-3.6	.2478	97.6	+.0499	+19.8
1892	261	94.2	+247	+94.6	56.36	99.8	-2.30	-4.1	.2513	99.1	+.0449	+17.9
1893	254	91.7	+254	+100.0	56.36	99.8	-2.30	-4.1	.2495	98.4	+.0467	+18.7
1894	236	85.2	+272	+115.3	56.72	100.4	-2.66	-4.7	.2552	100.7	+.0410	+16.1
1895	238	85.9	+270	+113.4	56.52	100.0	-2.46	-4.4	.2567	101.3	+.0395	+15.4
1896	257	92.8	+251	+97.7	56.54	100.1	-2.48	-4.4	.2529	99.8	+.0433	+17.1
1897	289	104.3	+219	+75.8	56.27	99.6	-2.21	-3.9	.2485	98.0	+.0477	+19.2
1898	303	109.4	+205	+67.7	56.63	100.2	-2.57	-4.5	.2502	98.7	+.0460	+18.4
1899	373	134.7	+135	+36.2	56.77	100.5	-2.71	-4.8	.2620	103.4	+.0342	+13.1
1900	392	141.5	+116	+29.6	56.64	100.2	-2.58	-4.6	.2609	102.9	+.0353	+13.5
1901	414	149.5	+94	+22.7	56.80	100.5	-2.74	-4.8	.2698	106.4	+.0264	+9.8
1902	471	170.0	+37	+7.9	55.63	98.5	-1.57	-2.8	.2905	114.6	+.0057	+2.0
1903	508	183.4			54.06	95.7			.2962	116.8		

FLANGERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	14	100.0	+20	+142.9	57.14	100.0	-4.32	-7.6	\$0.3326	100.0	\$0.0156	-4.7
1890	13	92.9	+21	+161.5	57.62	100.8	-4.80	-8.3	.4125	124.0	-.0955	-23.2
1891	11	78.6	+23	+209.1	57.36	100.4	-4.54	-7.9	.3396	101.8	-.0216	-6.4
1892	11	78.6	+23	+209.1	57.36	100.4	-4.54	-7.9	.3641	109.5	-.0471	-12.9
1893	10	71.4	+24	+240.0	56.80	99.4	-3.98	-7.0	.3053	91.8	-.0117	-3.8
1894	13	92.9	+21	+161.5	56.85	99.5	-4.03	-7.1	.3781	113.7	-.0611	-16.2
1895	11	78.6	+23	+209.1	56.91	99.6	-4.09	-7.2	.2985	88.2	-.0235	-8.0
1896	12	85.7	+22	+183.3	57.08	99.9	-4.26	-7.5	.3244	97.5	-.0074	-2.3
1897	11	78.6	+23	+209.1	57.36	100.4	-4.54	-7.9	.3077	92.5	-.0093	-3.0
1898	20	142.9	+14	+70.0	57.30	100.3	-4.48	-7.8	.2973	89.4	-.0197	-6.6
1899	25	178.6	+9	+36.0	56.76	99.3	-3.94	-6.9	.3048	91.6	-.0122	-4.0
1900	35	250.0	-1	-2.9	57.11	99.9	-4.29	-7.5	.3012	90.6	-.0138	-5.2
1901	42	300.0	-8	-19.0	56.36	98.6	-3.54	-6.3	.3058	91.9	-.0112	-3.7
1902	35	250.0	-1	-2.9	54.71	95.7	-1.89	-3.5	.3621	108.9	-.0451	-12.5
1903	34	242.9			52.82	92.4			.3170	95.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

HATS, FUR—Concluded.

WEIGHERS, Female.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-1899.	6	100.0	+	66.7	59.62	100.0	-	6.72	-11.3	\$0.1076	100.0	+\$0.0174
1890.	5	83.3	+	100.0	59.80	100.3	-	6.90	-11.5	.1103	102.5	+.0125
1891.	7	116.7	+	42.9	59.86	100.4	-	6.96	-11.6	.1038	102.0	+.0134
1892.	6	100.0	+	66.7	59.83	100.4	-	6.93	-11.6	.1058	98.3	+.0174
1893.	7	116.7	+	42.9	59.86	100.4	-	6.96	-11.6	.1074	99.8	+.0158
1894.	6	100.0	+	66.7	59.83	100.4	-	6.93	-11.6	.1031	95.8	+.0291
1895.	6	100.0	+	66.7	59.83	100.4	-	6.93	-11.6	.1058	98.3	+.0174
1896.	6	100.0	+	66.7	59.83	100.4	-	6.93	-11.6	.1086	100.9	+.0146
1897.	6	100.0	+	66.7	59.83	100.4	-	6.93	-11.6	.1058	98.3	+.0174
1898.	7	116.7	+	42.9	59.86	100.4	-	6.96	-11.6	.1074	99.8	+.0158
1899.	7	116.7	+	42.9	57.71	96.8	-	4.81	-8.3	.1119	104.0	+.0315
1900.	7	116.7	+	42.9	57.71	96.8	-	4.81	-8.3	.1143	106.2	+.0329
1901.	9	150.0	+	111.1	57.67	96.7	-	4.77	-8.3	.1142	106.1	+.0326
1902.	10	166.7	+	150.0	54.40	91.2	-	1.50	-2.8	.1213	112.7	+.0919
1903.	10	166.7	.....	.....	52.90	88.7	.....	.....	.1232	111.5	.....	.....

HOSIERY AND KNIT GOODS.

BOARDERS, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1901; 6 establishments, 1902, 1903.]

Av. 1890-1899.	75	100.0	-	3.2	59.16	100.0	-	1.07	-1.8	\$0.1197	100.0	-\$0.0344
1890.	75	98.7	-	4.0	59.92	101.3	-	1.83	-3.1	.1291	107.9	+.0219
1891.	79	105.5	-	1.3	59.52	101.3	-	1.83	-3.1	.1200	100.5	+.0161
1892.	80	105.3	-	2.5	59.63	101.3	-	1.81	-3.1	.1081	90.3	+.0326
1893.	91	119.7	-	13	58.99	99.7	-	1.96	-1.5	.1278	106.8	+.0225
1894.	18	24.0	-	14.3	58.09	98.2	.....	.....	.....	.1095	91.5	+.0455
1895.	52	69.5	-	4.9	58.78	99.1	-	1.69	-1.2	.1226	110.8	+.0375
1896.	71	93.4	-	9.9	58.96	99.7	-	1.87	-1.5	.1196	99.9	+.0346
1897.	61	81.2	-	21.6	59.00	99.7	-	1.91	-1.5	.1185	99.0	+.0350
1898.	81	106.6	-	6.0	58.96	99.7	-	1.87	-1.5	.1189	99.3	+.0351
1899.	81	106.6	-	3.7	59.66	99.8	-	1.97	-1.6	.1127	94.2	+.0674
1900.	85	111.8	-	8.2	58.91	99.6	-	1.85	-1.4	.1100	91.9	+.0697
1901.	80	105.3	-	2.5	58.70	99.2	-	1.91	-1.0	.1391	116.2	+.0510
1902.	98	128.4	-	13.1	58.67	99.2	-	1.98	-1.0	.1290	107.8	+.0517
1903.	78	102.6	.....	.....	58.09	98.2	.....	.....	.1501	125.4	.....	.....

FINISHERS, Female.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1901; 6 establishments, 1902, 1903.]

Av. 1890-1899.	296	100.0	-	11	59.71	100.0	-	2.39	-1.0	\$0.0892	100.0	-\$0.0140
1890.	119	76.0	-	61.1	59.88	101.1	-	3.13	-5.2	.0951	106.6	+.0131
1891.	140	91.8	-	33.3	59.10	101.3	-	3.15	-5.3	.1010	113.2	+.0672
1892.	269	135.2	-	10.8	59.97	101.3	-	3.18	-5.3	.0928	105.2	+.0144
1893.	197	106.5	-	21.8	59.71	101.0	-	2.97	-5.0	.0869	97.4	+.0211
1894.	147	76.1	-	41.8	59.97	99.3	-	2.78	-5.2	.0821	92.4	+.0658
1895.	196	98.5	-	21.4	59.79	101.1	-	3.04	-4.1	.0832	93.4	+.0241
1896.	106	105.1	-	16.3	59.63	100.8	-	2.88	-4.8	.0900	100.9	+.0182
1897.	195	99.3	-	23.1	59.71	100.8	-	2.86	-4.8	.0881	98.8	+.0201
1898.	214	109.2	-	23.1	59.71	100.6	-	2.76	-4.6	.0894	100.7	+.0188
1899.	198	101.6	-	21.2	59.48	100.6	-	2.71	-4.6	.0825	92.3	+.0559
1900.	229	121.9	-	11.7	59.99	98.1	-	1.21	-2.1	.0886	99.3	+.0196
1901.	227	116.8	-	6.7	57.81	97.8	-	1.09	-1.9	.0922	103.4	+.0160
1902.	225	114.8	-	5.7	58.01	98.1	-	1.26	-2.2	.0939	118.7	+.0623
1903.	210	122.1	.....	.....	56.75	96.0	.....	.....	.0982	121.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

HOSIERY AND KNIT GOODS—Continued.

KNITTERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1901; 4 establishments, 1902, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	41	100.0										
1890	21	47.7	+64	+93.2	58.39	100.0	-1.53	-2.6	\$0.1628	100.0	+\$0.0369	+23.9
1891	26	59.1	+59	+226.9	60.00	102.8	-3.14	-5.2	1753	107.7	+	0264
1892	37	84.1	+48	+129.7	60.00	102.8	-3.14	-5.2	1931	118.6	+	0086
1893	33	75.0	+52	+157.6	58.67	100.5	-1.81	-3.1	1625	99.8	+	0392
1894	25	56.8	+60	+240.0	53.32	91.3	+3.54	+6.6	1846	113.4	+	0171
1895	36	81.8	+49	+136.1	58.56	100.3	-1.70	-2.9	1790	110.0	+	0227
1896	51	115.9	+31	+66.7	58.47	100.1	-1.61	-2.8	1827	112.2	+	0190
1897	61	138.6	+24	+39.3	58.33	99.9	-1.47	-2.5	1471	90.4	+	0546
1898	78	177.3	+7	+9.0	58.28	99.8	-1.42	-2.4	1331	81.8	+	0686
1899	73	165.9	+12	+16.4	58.27	99.8	-1.41	-2.4	1390	85.4	+	0627
1900	80	181.8	+5	+6.3	57.63	98.7	-.77	-1.3	1314	80.7	+	0703
1901	97	220.5	-12	-12.4	57.66	98.7	-.80	-1.4	1480	90.9	+	0537
1902	89	202.3	-4	-4.5	57.66	98.7	-.80	-1.4	1503	92.3	+	0514
1903	85	193.2			56.86	97.4			1558	95.7	+	0459
									2017	123.9		

KNITTERS, Female.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 7 establishments, 1890-1895; 6 establishments, 1896, 1897, 1902, 1903; 5 establishments, 1898-1901.]

Av. 1890-99.	230	100.0										
1890	238	82.1	+114	+47.9	59.51	100.0	-0.82	-1.4	\$0.0896	100.0	+\$0.0149	+16.6
1891	318	109.7	-34	+10.7	59.84	100.6	-1.15	-1.9	0940	104.9	+	0105
1892	312	107.6	-40	+12.8	59.84	100.6	-1.15	-1.9	0939	104.8	+	0106
1893	362	124.8	-10	-2.8	59.78	100.5	-1.09	-1.8	0887	92.0	+	0158
1894	261	90.0	+91	+34.9	56.96	85.7	+1.73	+3.0	0873	97.4	+	0172
1895	284	97.9	+68	+23.9	59.74	100.4	-1.05	-1.8	0906	101.1	+	0139
1896	280	96.6	+72	+25.7	59.79	100.5	-1.10	-1.8	0883	98.5	+	0168
1897	251	86.6	+101	+40.2	59.78	100.5	-1.09	-1.8	0885	98.5	+	0162
1898	285	98.3	+67	+23.5	59.78	100.5	-1.09	-1.8	0862	96.2	+	0183
1899	306	105.5	+46	+15.0	59.79	100.5	-1.10	-1.8	0847	94.5	+	0198
1900	308	106.2	+44	+14.3	59.07	99.3	-.38	-.6	0820	91.5	+	0225
1901	291	100.3	-61	+21.0	59.26	99.6	-.57	-1.0	0847	94.5	+	0198
1902	318	109.7	+34	+10.7	59.09	99.3	-.40	-.7	0921	103.1	+	0121
1903	352	121.4			58.69	98.6			1007	112.4	+	0038
									1015	116.6		

LOOPERS, Female.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 4 establishments, 1890-1893; 5 establishments, 1894-1902; 6 establishments, 1903.]

Av. 1890-99.	58	100.0										
1890	55	91.8	+1	+1.8	59.84	101.9	-2.21	-3.7	\$0.1206	100.0	+\$0.0073	+6.1
1891	81	139.7	-25	-30.9	59.89	102.0	-2.26	-3.8	1203	99.8	+	0076
1892	83	143.1	-27	-32.5	59.89	102.0	-2.26	-3.8	1246	103.3	+	0033
1893	77	132.8	-21	-27.3	59.65	101.6	-2.02	-3.4	1206	100.0	+	0073
1894	41	70.7	+15	+36.6	53.72	91.5	+3.91	+7.3	1257	104.2	+	0022
1895	44	75.9	+12	+27.3	59.50	101.3	-1.87	-3.1	1157	95.9	+	0122
1896	40	69.0	+18	+0.0	58.63	99.9	-1.00	-1.7	1287	106.7	+	0008
1897	48	82.8	+8	+16.7	58.63	99.9	-1.00	-1.7	1416	117.4	+	0137
1898	51	87.9	+5	+9.8	58.64	99.9	-1.01	-1.7	1097	91.0	+	0182
1899	56	96.6			58.68	99.9	-1.05	-1.8	1125	93.3	+	0151
1900	67	115.5	-11	-16.4	57.70	98.3	-.07	-.1	1067	88.5	+	0212
1901	51	87.9	+5	+9.8	57.66	98.2	-.08	-.1	0873	80.7	+	0306
1902	48	82.8	+8	+16.7	57.63	98.2			1137	94.3	+	0142
1903	56	96.6			57.63	98.2			1120	92.9	+	0159
									1279	106.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

HOSIERY AND KNIT GOODS—Continued.

MENDERS, Female.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 1 establishment, 1890-1901; 6 establishments, 1902, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	83	100.0	+ 9	+ 10.8	58.95	100.0	-0.82	-1.4	\$0.1086	100.0	+\$0.0114	+ 10.5
1890.	71	85.5	+ 21	+ 29.6	60.00	101.8	-1.87	-3.1	.1183	108.9	+.0037	+ 3.4
1891.	79	95.2	+ 13	+ 16.5	60.00	101.8	-1.87	-3.1	.1146	105.5	+.0054	+ 5.0
1892.	138	166.5	- 16	- 33.3	60.00	101.8	-1.87	-3.1	.1082	99.6	+.0118	+ 10.8
1893.	91	109.6	+ 1	+ 1.1	58.68	99.5	-.55	-.9	.1095	100.8	+.0105	+ 9.6
1894.	92	110.8			59.52	95.9	+1.61	+2.0	.1004	92.4	+.0186	+ 17.1
1895.	71	89.2	+18	+24.3	58.62	99.4	-.49	-.8	.1232	113.4	+.0062	+ 5.7
1896.	62	74.7	+30	+48.4	58.77	99.7	-.64	-1.1	.1062	97.8	+.0128	+ 11.8
1897.	57	68.7	+35	+61.4	59.02	100.1	-.98	-1.5	.1000	92.1	+.0240	+ 26.4
1898.	100	120.5	- 8	- 8.0	59.08	100.2	-.95	-1.6	.1040	95.8	+.0160	+ 14.8
1899.	70	84.3	+22	+31.4	58.83	99.8	-.70	-1.2	.1019	93.8	+.0181	+ 16.7
1900.	88	106.0	- 4	- 4.5	58.50	99.2	-.37	-.6	.1130	104.1	+.0076	+ 7.0
1901.	97	116.9	- 5	- 5.2	58.26	98.8	-.13	-.2	.1002	92.3	+.0198	+ 18.2
1902.	100	120.5	- 8	- 8.0	58.78	99.0	-.25	-.4	.1218	112.2	+.0058	+ 5.3
1903.	92	110.8			58.13	98.6			.1200	110.5		

PRESSERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 1 establishment, 1890, 1891, 1902, 1903; 4 establishments, 1892-1901.]

Av. 1890-99.	17	100.0	- 7	- 41.2	59.75	100.0	-0.40	-0.7	\$0.1584	100.0	+\$0.0237	+ 15.0
1890.	16	94.1	- 8	- 50.0	60.00	101.1	-1.01	-1.7	.1702	107.4	+.0128	+ 8.1
1891.	13	76.5	-11	- 61.6	60.00	101.1	-1.01	-1.7	.1667	105.2	+.0171	+ 10.8
1892.	26	152.6	- 4	- 26.0	60.00	101.1	-1.04	-1.7	.1367	92.6	+.0374	+ 35.0
1893.	20	117.6	- 1	- 29.0	59.82	100.8	-.86	-1.4	.1367	98.9	+.0271	+ 17.1
1894.	19	111.8	- 5	- 26.3	54.81	92.3	+1.15	+7.6	.1199	94.6	+.0342	+ 32.3
1895.	18	94.1	- 8	- 50.0	59.75	100.7	-.82	-1.4	.1195	94.1	+.0316	+ 27.3
1896.	18	100.9	- 6	- 33.3	59.80	100.7	-.81	-1.4	.1598	100.9	+.0211	+ 13.3
1897.	17	100.0	- 7	- 41.2	59.79	100.7	-.83	-1.4	.1596	100.8	+.0215	+ 13.4
1898.	16	94.1	- 8	- 50.0	59.75	100.7	-.82	-1.4	.1615	103.9	+.0196	+ 12.4
1899.	18	100.9	- 6	- 33.3	59.80	100.7	-.81	-1.4	.1606	101.4	+.0221	+ 13.9
1900.	19	111.8	- 5	- 26.3	58.78	98.3	+1.58	+1.0	.1688	106.6	+.0158	+ 9.9
1901.	16	94.1	- 8	- 50.0	59.82	95.1	+1.11	+2.0	.1611	103.6	+.0240	+ 22.7
1902.	26	152.6	- 4	- 26.0	58.75	99.9	-.21	-.4	.1696	107.1	+.0171	+ 10.8
1903.	24	141.2			58.26	99.0			.1811	116.2		

PRESSERS, Female.

[Data for employees from 4 establishments.]

Av. 1890-99.	26	100.0	- 7	- 26.9	58.4	100.0	-0.40	-0.7	\$0.0817	100.0	+\$0.0067	+ 8.2
1890.	25	96.2	- 8	- 30.8	58.4	100.0	-1.00	-1.7	.0990	110.8	+.0081	+ 9.9
1891.	26	100.0	- 7	- 26.9	58.4	100.0	-1.00	-1.7	.0954	102.3	+.0072	+ 8.8
1892.	14	53.8	- 1	- 3.8	60.0	103.4	-2.00	-3.3	.0929	101.5	+.0099	+ 12.1
1893.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1894.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1895.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1896.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1897.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1898.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1899.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1900.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1901.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1902.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1
1903.	15	57.7	- 1	- 3.8	58.2	100.0	-1.00	-1.7	.0929	99.8	+.0099	+ 12.1

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899 = 100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

HOSIERY AND KNIT GOODS—Concluded.

RIBBERS, Female.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	40	100.0	+ 3	+ 7.5	60.00	100.0			\$0.1371	100.0	+\$0.0261	+19.0
1890	43	107.5			60.00	100.0			.1378	100.5	+.0254	+18.4
1891	41	102.5	+ 2	+ 4.9	60.00	100.0			.1543	112.3	+.0089	+ 5.8
1892	45	112.5	- 2	- 4.4	60.00	100.0			.1414	103.1	+.0218	+15.4
1893	43	107.5			60.00	100.0			.1417	103.4	+.0215	+15.2
1894	41	102.5	+ 2	+ 4.9	60.00	100.0			.1259	91.8	+.0373	+29.6
1895	39	97.5	+ 4	+10.3	60.00	100.0			.1355	98.8	+.0277	+20.4
1896	37	92.5	+ 6	+16.2	60.00	100.0			.1196	87.2	+.0436	+36.5
1897	39	97.5	+ 4	+10.3	60.00	100.0			.1261	92.0	+.0371	+29.4
1898	36	90.0	+ 7	+19.4	60.00	100.0			.1321	96.4	+.0311	+23.5
1899	32	80.0	+11	+34.4	60.00	100.0			.1568	114.4	+.0061	+ 4.1
1900	39	97.5	+ 4	+10.3	60.00	100.0			.1510	110.1	+.0122	+ 8.1
1901	38	95.0	+ 5	+13.2	60.00	100.0			.1547	112.8	+.0085	+ 5.5
1902	36	90.0	+ 7	+19.4	60.00	100.0			.1658	120.9	-.0026	- 1.6
1903	43	107.5			60.00	100.0			.1632	119.0		

IRON AND STEEL, BAR IRON.

CATCHERS, Male.

[Data for employees from 12 establishments for entire period. Data for hours and wages from 13 establishments, 1890, 1891, 1895; 11 establishments, 1891-1893, 1896-1898; 15 establishments, 1899; 16 establishments, 1900-1903.]

Av. 1890-99.	32	100.0	- 6	-18.8	63.61	100.0	-1.07	-1.7	\$0.2826	100.0	+\$0.1362	+44.7
1890	30	93.8	- 8	-26.7	65.38	102.8	- 2.84	-4.3	.3282	116.1	+.0806	+24.6
1891	30	93.8	- 8	-26.7	64.49	101.4	- 1.95	-3.0	.2961	104.8	+.1127	+38.1
1892	31	96.9	- 7	-22.6	64.49	101.4	- 1.95	-3.0	.2819	99.8	+.1269	+45.0
1893	36	112.5	- 2	-5.6	64.09	100.8	- 1.55	-2.4	.2594	91.8	+.1491	+57.6
1894	33	103.1	+ 5	+15.2	64.41	101.3	- 1.87	-2.9	.2169	87.4	+.1619	+65.6
1895	35	109.4	+ 3	+8.6	63.61	100.0	- 1.07	-1.7	.2180	87.8	+.1608	+64.8
1896	28	87.5	-10	-35.7	64.11	100.8	- 1.57	-2.4	.2873	101.7	+.1215	+42.3
1897	31	96.9	- 7	-22.6	62.20	97.8	- 1.34	-2.4	.2582	98.4	+.1506	+46.9
1898	32	100.0	+ 6	+18.8	62.10	97.6	- 1.44	-2.7	.2657	94.0	+.1431	+38.9
1899	33	103.1	- 5	-15.2	61.19	96.2	+1.35	+2.2	.2345	118.4	+.0743	+22.2
1900	33	103.1	- 5	-15.2	61.72	97.0	- 1.82	-2.8	.3155	121.2	+.0662	+19.3
1901	33	103.1	- 5	-15.2	61.63	96.9	+ 1.91	+1.6	.3112	120.7	+.0676	+19.8
1902	36	112.5	+ 2	+5.6	62.59	98.4	- 1.05	-1.7	.3883	137.4	+.0305	+ 5.3
1903	38	118.8			62.51	98.3			.3689	144.7		

HEATERS, Male.

[Data for employees from 12 establishments for entire period. Data for hours and wages from 13 establishments, 1891, 1891, 1895; 14 establishments, 1891-1893, 1896-1898; 15 establishments, 1899; 16 establishments, 1900-1903.]

Av. 1890-99.	49	100.0	+4	+8.2	64.57	100.0	- 0.52	-0.8	\$0.4700	100.0	+\$0.0992	+21.1
1890	47	95.9	+6	+12.8	66.69	103.3	- 2.64	-4.0	.5492	116.9	+.0200	+ 3.6
1891	49	100.0	-4	-8.2	65.76	101.8	-1.71	-2.6	.5006	106.5	+.0646	+13.7
1892	48	98.0	-5	-10.4	65.96	102.2	-1.91	-2.9	.4608	98.0	+.1044	+23.5
1893	49	100.0	+4	+8.2	65.67	101.7	-1.62	-2.5	.4330	92.1	+.1362	+31.8
1894	45	91.8	+8	+17.8	65.71	101.8	-1.69	-2.6	.4129	94.2	+.1263	+28.1
1895	51	104.1	+7	+13.9	65.24	101.0	-1.19	-1.8	.4137	98.0	+.1555	+35.6
1896	46	93.9	+2	+4.1	65.43	101.3	-1.38	-2.1	.4186	95.4	+.1206	+26.6
1897	52	106.1	-1	-1.9	61.81	95.7	+2.21	+3.6	.4589	97.6	+.1108	+23.1
1898	49	100.0	+4	+8.2	61.96	96.0	-2.09	-3.4	.4628	98.5	+.1064	+22.6
1899	50	102.0	+3	+6.0	61.43	95.1	+2.62	+4.3	.5293	112.6	+.0399	+ 8.5
1900	51	110.2	-1	-1.9	62.21	96.3	-1.84	-3.0	.5625	119.7	+.0067	+ 1.4
1901	46	93.9	-7	-15.2	64.35	99.7	- 1.30	-2.5	.5162	109.8	+.0550	+12.1
1902	47	95.9	+6	+12.8	64.49	99.9	- 1.44	-2.7	.5493	116.9	+.0200	+ 3.6
1903	53	108.2			64.05	99.2			.5692	121.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

IRON AND STEEL, BAR IRON—Continued.

HEATERS' HELPERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 11 establishments, 1890-1894, 1895; 13 establishments, 1891-1893, 1896-1898; 14 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	53	100.0	-4	-7.5	61.93	100.0	+0.46	+0.7	80.2051	100.0	-\$0.0755	-10.0
1890.	53	100.0	-4	-7.5	67.44	103.9	-2.05	-3.0	2425	118.2	-	-
1891.	56	105.7	7	12.5	66.48	102.4	-1.09	-1.6	2086	101.7	-	-
1892.	55	103.8	-6	-10.9	66.59	102.6	1.20	+1.8	2033	99.1	-	-
1893.	57	107.5	8	14.0	66.56	102.5	-1.17	-1.8	1982	96.6	-	-
1894.	55	103.8	-6	-10.9	65.10	100.3	+ .29	+ .4	1865	90.9	-	-
1895.	51	96.2	2	3.9	65.50	100.9	- .11	- .2	1917	93.5	-	-
1896.	49	92.5	-	-	65.00	100.1	+ .39	+ .6	1973	96.2	-	-
1897.	51	96.2	-2	-3.9	62.39	96.1	+3.60	+4.8	1946	94.9	-	-
1898.	51	96.2	2	3.9	62.35	96.0	+3.01	+4.9	1988	96.9	-	-
1899.	52	98.1	-3	-5.8	61.86	95.3	+3.53	+5.7	2224	111.8	-	-
1900.	54	101.9	5	9.3	63.85	98.3	+1.54	+2.4	2441	119.0	-	-
1901.	46	86.8	+3	+6.5	65.61	101.1	- .25	- .4	2392	116.6	-	-
1902.	48	90.6	+1	+2.1	65.55	101.0	- .16	- .2	2622	127.8	-	-
1903.	49	92.5	-	-	65.39	100.7	-	-	2786	135.8	-	-

HOT STRAIGHTENERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 11 establishments, 1890; 12 establishments, 1891-1899; 13 establishments, 1900-1903.]

Av. 1890-99.	67	100.0	+16	+13.9	61.78	100.0	2.33	+5.5	1566	100.0	-\$0.0565	-10.0
1890.	68	101.5	9	+13.2	65.39	102.8	4.71	+7.1	1548	102.0	-	-
1891.	68	101.5	+9	+13.2	65.67	101.4	3.82	5.8	1696	102.6	-	-
1892.	68	101.5	+9	+13.2	65.71	101.5	3.89	5.9	1517	96.9	-	-
1893.	68	101.5	+9	+13.2	65.74	101.5	3.89	5.9	1549	98.9	-	-
1894.	65	97.0	-12	-18.5	65.97	101.8	4.12	+6.2	1634	87.1	-	-
1895.	67	100.0	-10	-14.9	65.40	101.0	3.55	5.1	1624	103.7	-	-
1896.	67	100.0	-10	-14.9	65.55	101.2	3.70	5.6	1694	108.2	-	-
1897.	64	95.5	-13	-20.3	63.56	95.4	1.71	-2.7	1436	91.7	-	-
1898.	63	94.5	-11	-16.7	61.81	95.4	1.01	+1.1	1387	96.2	-	-
1899.	69	102.0	-8	-11.6	61.77	95.4	1.08	+1.1	1768	112.9	-	-
1900.	75	111.9	-2	-2.7	65.26	96.1	1.11	-1.7	1753	110.7	-	-
1901.	75	111.9	-2	-2.7	65.29	96.2	1.11	-1.7	1879	120.0	-	-
1902.	76	113.4	+1	+1.3	65.37	96.6	1.72	+1.2	2197	140.3	-	-
1903.	77	114.9	-	-	61.85	95.5	-	-	2171	136.1	-	-

ROLLERS, Male.

[Data for employees from 12 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1894, 1895; 11 establishments, 1891-1893, 1896-1899; 13 establishments, 1900-1903.]

Av. 1890-99.	29	100.0	4	+13.8	61.68	100.0	0.72	+1.1	80.987	100.0	-\$0.2244	-10.0
1890.	27	93.1	3	+10.9	64.65	101.5	1.57	+2.6	1262	102.9	-	-
1891.	27	93.1	6	+22.6	64.48	101.3	1.52	2.4	1604	105.2	-	-
1892.	28	96.6	5	+17.9	64.71	101.6	1.75	2.7	1696	103.7	-	-
1893.	31	107.2	1	+2.9	65.70	100.0	1.74	1.2	1636	92.6	-	-
1894.	29	100.0	3	+10.9	64.3	101.4	1.59	2.2	1518	89.0	-	-
1895.	30	103.4	3	+10.6	64.69	101.5	1.64	1.0	1634	89.3	-	-
1896.	27	93.1	-6	-22.2	63.25	99.9	1.26	-2.0	1603	98.8	-	-
1897.	28	96.6	-2	-7.5	62.24	97.7	- .72	-1.2	1646	106.1	-	-
1898.	28	96.6	5	+17.9	62.24	97.7	- .72	-1.2	1610	102.0	-	-
1899.	30	103.4	-4	-13.8	62.17	97.6	- .79	-1.3	1670	114.5	-	-
1900.	33	113.8	-	-	62.82	98.6	- .14	- .2	1757	119.5	-	-
1901.	30	103.4	-3	-10.0	63.02	99.0	- .06	- .1	1706	115.0	-	-
1902.	32	110.3	-1	-3.1	63.02	99.0	- .06	- .1	1864	134.1	-	-
1903.	33	113.8	-	-	62.96	98.9	-	-	1831	136.9	-	-

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

IRON AND STEEL, BAR IRON—Concluded.

ROUGHERS, Male.

[Data for employees from 12 establishments for entire period. Data for hours and wages from 13 establishments, 1890, 1894, 1895; 14 establishments, 1891-1893, 1896-1898; 15 establishments, 1899; 16 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	57	100.0	+4	+ 7.0	62.85	100.0	-1.55	-2.5	\$0.3102	100.0	+\$0.1377	+44.4
1890	56	101.8	+3	+ 5.2	64.06	101.9	-2.76	-4.3	.3276	105.6	+.1203	+38.7
1891	55	96.5	+6	+10.9	63.66	101.3	-2.36	-3.7	.3379	108.9	+.1100	+32.6
1892	53	93.0	+8	+15.1	63.82	101.5	-2.52	-3.9	.3304	106.5	+.1175	+35.6
1893	55	96.5	+6	+10.9	63.83	101.6	-2.53	-4.0	.3170	102.2	+.1309	+41.3
1894	56	101.8	+3	+ 5.2	63.65	101.3	-2.35	-3.7	.2854	92.0	+.1625	+56.9
1895	62	108.8	-1	- 1.6	63.44	100.9	-2.14	-3.4	.2715	87.5	+.1764	+65.0
1896	55	96.5	+6	+10.9	63.77	101.5	-2.47	-3.9	.2964	95.6	+.1515	+51.1
1897	54	94.7	+7	+13.0	61.13	97.3	+ .17	+ .3	.3065	99.5	+.1394	+45.2
1898	61	107.0	.....	.....	60.86	96.8	+ .44	+ .7	.2792	90.0	+.1687	+60.4
1899	59	103.5	-2	- 3.4	60.26	95.9	+1.04	+1.7	.3478	112.1	+.1001	+28.8
1900	64	112.3	-3	- 4.7	61.13	97.3	+ .17	+ .3	.3701	119.3	+.0778	+21.0
1901	60	105.3	+1	+ 1.7	61.36	97.6	-.06	- 1	.3913	126.1	+.0566	+14.5
1902	58	101.8	+3	+ 5.2	61.46	97.8	-.16	- .3	.4361	140.6	+.0118	+ 2.7
1903	61	107.0	.....	.....	61.30	97.5	.....	.....	.4479	144.4	.....	.....

IRON AND STEEL, BESSEMER CONVERTING.

BLOWERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 6 establishments, 1890; 7 establishments, 1891, 1894-1896; 8 establishments, 1892, 1893, 1897-1900; 9 establishments, 1901-1903.]

Av. 1890-99.	12	100.0	+3	+25.0	66.96	100.0	-7.01	-10.5	\$0.4218	100.0	+\$0.1871	+44.4
1890	11	91.7	+4	+36.4	69.82	104.3	-9.87	-14.1	.3600	85.3	+.2489	+69.1
1891	12	100.0	+3	+25.0	65.14	97.3	-5.19	-8.0	.4271	101.3	+.1818	+42.6
1892	12	100.0	+3	+25.0	68.00	101.6	-8.05	-11.8	.3897	92.4	+.2192	+56.2
1893	12	100.0	+3	+25.0	66.40	99.2	-6.45	-9.7	.4138	98.1	+.1951	+47.1
1894	12	100.0	+3	+25.0	66.46	99.3	-6.51	-9.8	.4122	97.7	+.1967	+47.7
1895	12	100.0	+3	+25.0	66.86	99.9	-6.91	-10.3	.4303	102.0	+.1786	+41.5
1896	12	100.0	+3	+25.0	66.86	99.9	-6.91	-10.3	.4568	108.3	+.1521	+33.8
1897	12	100.0	+3	+25.0	66.69	99.6	-6.74	-10.1	.4223	101.1	+.1866	+44.2
1898	12	100.0	+3	+25.0	66.69	99.6	-6.74	-10.1	.4387	104.0	+.1702	+34.8
1899	12	100.0	+3	+25.0	66.69	99.6	-6.74	-10.1	.4673	110.8	+.1416	+30.3
1900	14	116.7	+1	+ 7.1	59.28	88.5	+ .67	+ 1.1	.5122	121.4	+.0967	+18.9
1901	14	116.7	+1	+ 7.1	60.55	90.4	-.60	- 1.0	.5465	129.6	+.0624	+11.4
1902	14	116.7	+1	+ 7.1	60.55	90.4	-.60	- 1.0	.5683	134.7	+.0406	+ 7.1
1903	15	125.0	.....	.....	59.95	89.5	.....	.....	.6089	144.4	.....	.....

BOTTOM MAKERS, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890; 7 establishments, 1891-1893, 1897-1900; 6 establishments, 1894-1896; 8 establishments, 1901-1903.]

Av. 1890-99.	12	100.0	-1	-8.3	67.33	100.0	-0.23	0.3	\$0.2750	100.0	-\$0.0606	+22.2
1890	11	91.7	.....	.....	69.82	103.7	-2.72	-3.9	.3411	126.0	-.0105	- 3.1
1891	12	100.0	-1	- 8.3	67.20	99.8	-.10	- 1	.3213	117.7	-.0123	+ 3.8
1892	12	100.0	-1	- 8.3	68.40	101.6	-1.30	- 1.9	.3284	120.3	-.0052	+ 1.6
1893	12	100.0	-1	- 8.3	67.80	100.7	-.70	-1.0	.2888	105.8	-.0448	+15.5
1894	12	100.0	-1	- 8.3	66.86	99.3	+ .24	+ .4	.2692	98.6	+.0644	+23.9
1895	12	100.0	-1	- 8.3	66.86	99.3	+ .24	+ .4	.2742	100.4	+.0594	+21.7
1896	12	100.0	-1	- 8.3	66.86	99.3	+ .24	+ .4	.2598	95.2	+.0738	+28.4
1897	12	100.0	-1	- 8.3	66.45	98.7	+ .65	+ 1.0	.2135	78.2	+.1201	+56.2
1898	12	100.0	-1	- 8.3	66.56	98.9	+ .54	+ .8	.2178	79.8	+.1158	+53.3
1899	12	100.0	-1	- 8.3	66.45	98.7	+ .65	+ 1.0	.2129	78.0	+.1207	+56.7
1900	12	100.0	-1	- 8.3	63.29	94.0	+3.81	+6.0	.2462	90.2	+.0874	+35.5
1901	12	100.0	-1	- 8.3	63.90	94.9	+3.20	+5.0	.2881	105.5	+.0455	+15.8
1902	12	100.0	.....	.....	63.90	94.9	+3.20	+5.0	.3151	115.4	+.0185	+ 5.9
1903	11	91.7	.....	.....	67.10	99.7	.....	.....	.3336	122.2	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

IRON AND STEEL, BLAST FURNACE—Concluded.

KEEPERS, Male.

[Data for employees from 18 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1893, 1896-1903; 18 establishments, 1894, 1895.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	82	100.0	+11	+13.4	84.00	100.0			\$0.1735	100.0	+\$0.0285	+16.4
1890	76	92.7	+17	+22.4	84.00	100.0			1844	106.3	+	0056
1891	78	95.1	+15	+19.2	84.00	100.0			1882	108.5	+	0058
1892	87	106.1	+6	+6.9	84.00	100.0			1888	108.8	+	0052
1893	81	98.8	+12	+14.8	84.00	100.0			1847	106.5	+	0053
1894	82	100.0	+11	+13.4	84.00	100.0			1605	92.5	+	0335
1895	82	100.0	+11	+13.4	84.00	100.0			1689	97.3	+	0251
1896	79	96.3	+14	+17.7	84.00	100.0			1717	99.0	+	0223
1897	79	96.3	+14	+17.7	84.00	100.0			1583	91.2	+	0357
1898	86	104.9	+7	+8.1	84.00	100.0			1580	91.1	+	0360
1899	87	106.1	+6	+6.9	84.00	100.0			1712	98.7	+	0228
1900	86	104.9	+7	+8.1	84.00	100.0			1798	103.6	+	0162
1901	90	109.8	+3	+3.3	84.00	100.0			1807	104.1	+	0133
1902	94	114.6	-1	-1.1	84.00	100.0			1889	108.9	+	0051
1903	93	113.4			84.00	100.0			1940	111.8		

KEEPERS' HELPERS, Male.

[Data for employees from 18 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1893, 1896-1903; 18 establishments, 1894, 1895.]

Av. 1890-99.	223	100.0	+16	+7.2	84.00	100.0			\$0.1380	100.0	+\$0.0183	+13.3
1890	200	89.7	+39	+19.5	84.00	100.0			1450	103.1	+	0115
1891	200	89.7	+39	+19.5	84.00	100.0			1478	107.1	+	0067
1892	241	108.1	-2	-0.8	84.00	100.0			1495	108.3	+	0070
1893	221	99.1	+18	+8.1	84.00	100.0			1475	106.9	+	0080
1894	222	99.6	+17	+7.7	84.00	100.0			1223	88.6	+	0542
1895	219	98.2	+20	+9.1	84.00	100.0			1361	98.6	+	0234
1896	220	98.7	+19	+8.6	84.00	100.0			1392	100.9	+	0175
1897	222	99.6	+17	+7.7	84.00	100.0			1255	90.9	+	0310
1898	236	105.8	+3	+1.3	84.00	100.0			1272	92.2	+	0283
1899	244	109.4	-5	-2.0	84.00	100.0			1399	101.4	+	0166
1900	240	107.6	-1	-0.4	84.00	100.0			1453	105.3	+	0112
1901	251	113.9	-15	-5.9	84.00	100.0			1457	105.6	+	0108
1902	256	114.8	-17	-6.6	84.00	100.0			1515	109.8	+	0050
1903	239	107.2			84.00	100.0			1565	113.4		

TOP FILLERS, Male.

[Data for employees from 16 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1893, 1896-1903; 16 establishments, 1894, 1895.]

Av. 1890-99.	168	100.0	-40	-23.8	84.00	100.0			\$0.1419	100.0	-\$0.0170	-12.0
1890	147	87.5	-19	-12.9	84.00	100.0			1473	103.8	+	0116
1891	155	92.3	-27	-17.4	84.00	100.0			1474	103.9	+	0115
1892	181	109.6	-56	-30.4	84.00	100.0			1515	106.8	+	0074
1893	171	101.8	-43	-25.1	84.00	100.0			1495	105.4	+	0074
1894	175	104.2	-47	-26.9	84.00	100.0			1312	92.5	+	0227
1895	177	105.4	-49	-27.7	84.00	100.0			1330	93.7	+	0259
1896	166	98.8	-38	-22.9	84.00	100.0			1406	99.1	+	0183
1897	166	98.8	-38	-22.9	84.00	100.0			1349	95.1	+	0240
1898	170	101.2	-42	-24.7	84.00	100.0			1344	94.7	+	0245
1899	173	103.0	-45	-26.0	84.00	100.0			1491	105.1	+	0088
1900	171	101.8	-43	-25.1	84.00	100.0			1512	108.7	+	0047
1901	160	95.2	-32	-20.0	84.00	100.0			1541	108.6	+	0048
1902	138	82.1	-10	-7.2	84.00	100.0			1565	110.3	+	0024
1903	128	76.2			84.00	100.0			1589	112.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

IRON AND STEEL, BLOOMING MILL.

CATCHERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	2	100.0	+1	+50.0	69.60	100.0	-21.60	-31.0	\$0.3160	100.0	+\$0.1282	+40.6
1890	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.2888	91.4	.1554	+53.8
1891	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3045	96.4	.1397	+45.9
1892	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3225	102.1	.1217	+37.7
1893	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3377	106.9	.1065	+31.5
1894	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.2922	92.5	.1520	+52.0
1895	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3128	99.0	.1314	+46.3
1896	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3260	103.2	.1182	+36.0
1897	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3303	104.5	.1139	+34.5
1898	2	100.0	+1	+50.0	72.00	103.4	-24.00	-33.3	.3117	98.6	.1325	+42.5
1899	3	150.0			48.00	69.0			.3335	105.5	.1107	+33.2
1900	3	150.0			48.00	69.0			.3536	111.9	.0906	+25.6
1901	3	150.0			48.00	69.0			.4348	137.6	.0094	+ 2.2
1902	3	150.0			48.00	69.0			.4897	155.0	.0455	- 9.3
1903	3	150.0			48.00	69.0			.4442	140.6		

CHARGERS, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890, 1894-1896; 6 establishments, 1891-1893, 1897-1903.]

Av. 1890-99.	38	100.0	- 6	-15.8	59.08	100.0	-1.08	-1.7	\$0.2852	100.0	+\$0.0342	+12.0
1890	39	102.6	- 7	-17.9	57.23	96.9	+ .82	+1.4	.2882	101.1	.0312	+10.8
1891	42	110.5	-10	-23.8	56.16	95.1	+1.89	+3.4	.3048	106.9	.0146	+ 4.8
1892	45	118.4	-13	-28.9	57.88	98.0	+ .17	+ .3	.3320	116.4	.0126	- 3.8
1893	46	121.1	-14	-30.4	58.42	98.9	- .37	- .6	.3184	111.6	.0010	+ .3
1894	38	100.0	- 6	-15.8	60.63	102.6	-2.58	-4.8	.2558	89.7	.0636	+24.9
1895	35	92.1	- 3	- 8.6	59.66	101.0	-1.61	-2.7	.2936	102.9	.0256	+ 8.8
1896	34	89.5	- 2	- 5.9	59.29	100.4	-1.24	-2.1	.3090	108.3	.0104	+ 3.4
1897	35	92.1	- 3	- 8.6	60.64	102.6	-2.59	-4.8	.2369	83.1	.0825	+34.8
1898	35	92.1	- 3	- 8.6	60.64	102.6	-2.59	-4.8	.2518	88.3	.0676	+26.8
1899	33	86.8	- 1	- 3.0	60.20	101.9	-2.15	-3.6	.2617	91.8	.0577	+22.0
1900	31	81.6	+ 1	+ 3.2	64.02	108.4	-5.97	-9.3	.2999	105.2	.0196	+ 6.5
1901	37	97.4	- 5	-13.5	59.18	100.2	-1.13	-1.9	.2710	95.0	.0484	+17.9
1902	32	84.2			58.76	99.5	- .71	-1.2	.2872	100.7	.0322	+11.2
1903	32	84.2			58.05	98.3			.3194	112.0		

DRAWERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	11	100.0	- 2	-18.2	63.09	100.0	+ 8.91	+14.1	\$0.2670	100.0	+\$0.0276	+10.3
1890	15	136.4	- 6	- 40.0	48.00	76.1	+24.00	+50.0	.3425	128.3	.0479	-14.0
1891	15	136.4	- 6	- 40.0	48.00	76.1	+24.00	+50.0	.2956	110.7	.0010	- .3
1892	14	127.3	- 5	-35.7	51.48	81.5	+20.57	+40.0	.3306	123.8	.0360	-10.9
1893	14	127.3	- 5	-35.7	51.43	81.5	+20.57	+40.0	.3152	118.1	.0206	- 6.5
1894	10	90.9	- 1	-10.0	72.00	114.1			.2154	80.7	.0792	+36.8
1895	9	81.8			72.00	114.1			.2340	89.1	.0566	+23.8
1896	9	81.8			72.00	114.1			.2624	98.3	.0322	+12.3
1897	9	81.8			72.00	114.1			.2044	76.6	.0902	+44.1
1898	9	81.8			72.00	114.1			.2067	77.4	.0879	+42.5
1899	9	81.8			72.00	114.1			.2592	97.1	.0354	+13.7
1900	9	81.8			72.00	114.1			.2939	110.1	.0007	+ .2
1901	9	81.8			72.00	114.1			.2820	105.6	.0126	+ 4.5
1902	9	81.8			72.00	114.1			.3279	122.8	.0333	-10.2
1903	9	81.8			72.00	114.1			.2946	110.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 70.]

IRON AND STEEL, BLOOMING MILL.—Continued.

HEATERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages: 5 establishments, 1890, 1891-1896; 7 establishments, 1891-1893, 1897-1899; 8 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase-decrease 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	27	100.0	1	-3.7	64.47	100.0	-6.32	-9.8	\$0.4257	100.0	-\$0.1856	-43.6
1890.	33	122.2	7	21.2	64.73	100.4	-6.58	-10.2	.4192	98.5	-.1255	-29.8
1891.	33	122.2	7	21.2	64.00	99.3	-5.85	-9.1	.4384	103.0	-.1731	-41.3
1892.	32	118.5	6	18.8	64.42	99.9	-6.27	-9.7	.4485	105.4	-.1690	-39.9
1893.	29	107.7	2	-7.1	63.53	98.5	-5.38	-8.5	.4747	111.5	-.1948	-45.2
1894.	32	81.5	4	-18.2	65.45	101.5	-7.30	-11.2	.3883	91.2	-.2282	-53.9
1895.	31	88.9	2	-8.3	66.00	102.4	-7.85	-11.9	.4291	100.8	-.1821	-42.9
1896.	32	81.5	4	-18.2	65.45	101.5	-7.30	-11.2	.4317	102.1	-.1799	-41.9
1897.	32	81.5	4	-18.2	65.46	101.5	-7.31	-11.2	.3772	88.6	-.2343	-55.4
1898.	33	89.2	3	-13.0	65.70	101.9	-7.55	-11.5	.3972	93.3	-.2145	-50.4
1899.	37	100.0	1	-3.7	59.91	92.9	-1.76	-2.9	.4497	105.6	-.1638	-36.9
1900.	36	96.3			62.38	96.8	-4.23	-6.8	.4924	115.7	-.1197	-26.5
1901.	37	100.0	1	-3.7	58.51	90.8	-.39	-.7	.5417	127.2	-.0668	-14.9
1902.	36	96.3			58.15	90.2			.5973	140.3	-.0542	-11.7
1903.	36	96.3			58.15	90.2			.6115	143.6		

HEATER'S HELPERS, Male.

[Data for employees from 4 establishments for entire period. Data for hours and wages: 5 establishments, 1890, 1891-1896; 5 establishments, 1891-1893, 1897-1899; 6 establishments, 1900-1903.]

Av. 1890-99.	49	100.0	23	46.9	70.57	100.0	-7.52	-10.7	\$0.4918	100.0	-\$0.1960	-39.8
1890.	81	165.3	53	107.9	71.41	101.2	-8.36	-11.7	.4597	83.3	-.2211	-45.5
1891.	76	153.1	50	101.8	71.50	101.3	-8.45	-11.8	.4676	87.4	-.2142	-44.2
1892.	70	142.9	44	89.9	72.00	102.0	-8.95	-12.4	.4680	87.6	-.2126	-44.1
1893.	37	75.5	26	53.0	72.00	102.0	-8.95	-12.4	.2083	42.3	-.3665	-86.8
1894.	31	63.3	5	16.1	72.00	102.0	-8.95	-12.4	.1949	39.6	-.3995	-81.2
1895.	41	83.7	15	30.6	72.00	102.0	-8.95	-12.4	.1897	38.6	-.4081	-85.2
1896.	31	63.3	5	16.1	72.00	102.0	-8.95	-12.4	.1892	38.6	-.4086	-85.3
1897.	31	63.3	5	16.1	69.71	98.8	-6.66	-9.6	.1889	38.5	-.4089	-85.3
1898.	26	53.1	10	27.8	69.92	99.1	-6.87	-9.8	.1866	37.5	-.4132	-86.2
1899.	44	89.8	18	40.9	64.49	89.5	-.14	-.2	.2555	51.9	-.3043	-59.1
1900.	35	71.4	9	22.7	65.95	93.5	-2.90	-4.4	.2462	49.4	-.3056	-60.3
1901.	31	63.3	5	16.1	64.35	91.2	-1.50	-2.0	.2658	54.0	-.2830	-51.8
1902.	36	73.5			64.06	90.8	-1.01	-1.6	.3197	65.0	-.2219	-33.9
1903.	36	73.5			67.06	89.3			.2978	59.3		

ROLLERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages: 7 establishments, 1890, 1891-1896; 7 establishments, 1891-1893, 1897-1899; 8 establishments, 1900-1903.]

Av. 1890-99.	49	100.0	8	16.3	66.78	100.0	-6.61	-10.9	\$0.4973	100.0	-\$0.1735	-34.9
1890.	47	96.1	6	12.2	62.41	100.2	-7.95	-12.8	.4555	91.6	-.2211	-45.5
1891.	48	98.1	7	14.3	66.66	98.7	-5.85	-9.7	.5657	113.8	-.1111	-24.3
1892.	48	98.1	7	14.3	66.26	98.7	-7.03	-11.5	.6281	126.3	-.0487	-10.0
1893.	49	100.0	6	12.2	67.27	101.3	-7.34	-12.2	.5179	110.0	-.2128	-44.8
1894.	49	100.0	6	12.2	66.67	99.8	-6.46	-10.7	.4578	88.0	-.2380	-48.0
1895.	49	100.0	6	12.2	66.67	99.8	-6.46	-10.7	.4661	93.6	-.2284	-47.2
1896.	50	102.0	7	14.3	67.26	100.7	-7.03	-11.5	.5064	101.6	-.1713	-34.4
1897.	50	102.0	7	14.3	66.67	99.8	-7.42	-12.0	.4435	87.4	-.2412	-54.2
1898.	50	102.0	7	14.3	66.67	99.8	-7.42	-12.0	.4551	91.6	-.2211	-45.5
1899.	52	121.1	2	8.7	67.98	99.9	-2.93	-4.1	.4670	91.9	-.2198	-44.1
1900.	52	121.1	2	8.7	84.49	95.7	-1.02	-6.9	.5336	107.3	-.1432	-31.7
1901.	55	131.6			64.47	89.1			.5940	119.4	-.0628	-12.7
1902.	55	131.6			64.47	89.1			.6044	121.5	-.0724	-14.6
1903.	55	131.6			64.47	89.1			.6768	136.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

IRON AND STEEL, BLOOMING MILL—Concluded.

TABLEMEN, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 2 establishments, 1890-1899; 3 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	3	100.0	+	33.3	70.80	100.0	+1.20	+1.7	\$0.1625	100.0	+\$0.0269	+16.6
1890	4	133.3			66.00	93.2	+6.00	+9.1	.1906	117.3	.0012	-.6
1891	4	133.3			66.00	93.2	+6.00	+9.1	.1810	111.4	.0084	+4.6
1892	4	133.3			72.00	101.7			.1519	93.6	.0375	+24.7
1893	4	133.3			72.00	101.7			.1451	101.6	.0243	+14.7
1894	3	100.0	+	33.3	72.00	101.7			.1442	88.7	.0452	+31.3
1895	3	100.0	+	33.3	72.00	101.7			.1379	84.9	.0515	+57.3
1896	3	100.0	+	33.3	72.00	101.7			.1611	101.0	.0253	+15.4
1897	3	100.0	+	33.3	72.00	101.7			.1640	100.9	.0254	+15.5
1898	2	66.7	+	100.0	72.00	101.7			.1550	95.4	.0344	+22.2
1899	3	100.0	+	33.3	72.00	101.7			.1713	105.4	.0181	+10.6
1900	4	133.3			72.00	101.7			.1546	95.1	.0348	+22.5
1901	4	133.3			72.00	101.7			.1731	106.5	.0163	+9.4
1902	4	133.3			72.00	101.7			.1833	112.8	.0061	+3.3
1903	4	133.3			72.00	101.7			.1894	116.6		

IRON AND STEEL, MUCK BAR.

CATCHERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 9 establishments, 1890-1899; 10 establishments, 1899; 11 establishments, 1900; 12 establishments 1901-1903.]

Av. 1890-99.	24	100.0			59.41	100.0	+0.57	+1.0	\$0.2190	100.0	+\$0.0736	+33.6
1890	25	89.3	+	12.0	59.60	100.3	+	.34	.2420	110.5	.0506	+20.9
1891	27	96.4	+	1	59.63	100.4	+	.35	.2352	107.4	.0574	+24.4
1892	23	100.0	-	1	59.64	100.4	+	.34	.2256	103.0	.0670	+29.7
1893	22	100.0			59.64	100.4	+	.34	.2234	102.0	.0692	+31.0
1894	20	107.1	-	6.7	59.67	100.4	+	.31	.2084	95.2	.0842	+40.4
1895	20	107.1	-	6.7	59.67	100.4	+	.31	.1980	88.1	.0996	+61.6
1896	22	100.0			59.61	99.0	+1.77	-3.0	.2078	94.9	.0848	+40.8
1897	23	117.9	-	5	59.09	99.5	+	.89	.2095	95.7	.0831	+39.7
1898	23	103.6	-	3.4	59.66	100.4	+	.32	.2119	96.8	.0807	+38.1
1899	25	89.3	+	12.0	59.30	99.8	+	.68	.2328	106.3	.0598	+25.7
1900	26	100.0			61.47	103.5	-1.49	-2.1	.2544	116.2	.0382	+15.0
1901	25	96.4	-	3.7	60.13	101.2	-	.15	.2473	112.9	.0453	+18.3
1902	26	92.9	-	7.7	59.97	100.9	+	.01	.2557	121.3	.0269	+10.1
1903	27	100.0			59.98	101.0			.2526	133.6		

HOOKERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 9 establishments, 1890-1899; 10 establishments, 1899; 11 establishments, 1900; 12 establishments, 1901-1903.]

Av. 1890-99.	23	100.0			58.73	100.0	+0.33	-0.6	\$0.1534	100.0	+\$0.0721	+47.0
1890	23	100.0			59.04	100.5	+	.02	.1462	95.3	.0793	+54.2
1891	24	104.3	-	4.2	59.08	100.6	-	.02	.1468	95.7	.0787	+53.6
1892	22	95.7	+	4.5	59.00	100.5	+	.06	.1474	96.1	.0781	+53.0
1893	23	100.0			59.04	100.5	+	.02	.1421	92.6	.0834	+58.7
1894	25	121.7	-	5	59.21	100.8	-	.15	.1301	84.8	.0954	+73.3
1895	25	108.7	-	8.0	59.12	100.7	-	.06	.1440	93.9	.0815	+56.6
1896	21	91.3	+	9.5	57.05	97.1	+2.01	-3.5	.1619	105.5	.0536	+39.3
1897	22	95.7	+	4.5	58.09	98.9	+	.97	.1609	108.8	.0586	+35.1
1898	20	87.0	+	15.0	58.90	100.3	+	.16	.1711	111.7	.0541	+31.6
1899	24	104.3	-	4.2	58.80	100.1	+	.26	.1775	115.7	.0480	+27.0
1900	24	104.3	-	4.2	60.57	103.1	-1.51	-2.5	.2089	136.1	.0167	+8.0
1901	23	100.0			59.06	100.6			.1947	128.6	.0313	+16.1
1902	26	113.0	-	11.5	58.97	100.4	+	.09	.1945	126.8	.0310	+15.9
1903	23	100.0			59.06	100.6			.2256	147.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

IRON AND STEEL, MUCK BAR—Continued.

PUDDLERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages for 11 establishments, 1890-1899; 12 establishments, 1900; 13 establishments, 1901-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	425	100.0	+ 78.	+18.4	57.76	100.0	+1.87	+3.2	\$0.3515	100.0	+ \$0.0164	+ 4.7
1890.	461	108.5	+ 42.	+ 9.1	57.66	99.8	+1.97	+3.4	.3756	106.9	+ .0079	+ 2.2
1891.	461	108.5	+ 42.	+ 9.1	57.54	99.6	+2.09	+3.6	.3692	105.0	+ .0013	+ .4
1892.	517	121.6	- 14.	- 2.7	57.13	98.9	+2.50	+4.4	.3603	102.5	+ .0076	+ 2.2
1893.	417	98.1	+ 86.	+20.6	57.28	99.2	+2.35	+4.1	.3970	112.9	+ .0291	+ 8.3
1894.	397	93.4	+106.	+26.7	58.83	101.9	+ .80	+1.4	.3298	93.8	+ .0381	+ 10.8
1895.	372	87.5	+131.	+35.2	58.51	101.3	+1.12	+1.9	.3439	97.8	+ .0246	+ 7.0
1896.	424	99.8	+ 79.	+18.6	55.77	96.6	+3.86	+6.9	.3417	97.2	+ .0282	+ 8.0
1897.	403	94.8	+100.	+24.8	58.03	100.5	+1.60	+2.8	.3309	94.1	+ .0370	+ 10.5
1898.	390	91.8	+113.	+29.0	58.66	101.6	+ .97	+1.7	.3304	94.0	+ .0375	+ 10.7
1899.	410	96.5	+ 93.	+22.7	58.20	100.8	+1.43	+2.5	.3362	95.6	+ .0317	+ 9.0
1900.	434	102.1	+ 69.	+15.9	60.98	105.6	-1.35	-2.2	.3361	95.6	+ .0318	+ 9.1
1901.	437	102.8	+ 66.	+15.1	59.61	103.2	+ .02	+ .03	.3415	97.2	+ .0284	+ 8.1
1902.	442	104.0	+ 61.	+13.8	59.63	103.2			.3633	103.4	+ .0446	+ 12.7
1903.	503	118.4			59.63	103.2			.3679	104.7		

PUDDLERS' HELPERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages for 11 establishments, 1890-1899; 12 establishments, 1900; 13 establishments, 1901-1903.]

Av. 1890-99.	469	100.0	- 74	+18.1	57.68	100.0	-1.93	+3.3	\$0.2161	100.0	-\$0.0271	-12.5
1890.	439	107.3	- 41	+10.0	57.54	99.8	-2.07	-3.6	.2253	104.3	+ .0179	+ 8.3
1891.	456	111.5	- 27	+ 5.9	57.51	99.7	-2.10	-3.7	.2177	100.7	+ .0235	+ 10.9
1892.	497	121.5	- 14	- 2.8	57.02	98.9	-2.59	-4.5	.2157	99.8	+ .0275	+ 12.7
1893.	388	91.9	+ 95	+24.5	57.08	99.0	+2.53	-4.4	.2481	114.8	+ .0349	+ 15.9
1894.	382	93.4	+101	+26.4	58.80	101.9	+ .81	+1.4	.2044	94.6	+ .0388	+ 18.0
1895.	355	86.8	+128	+36.1	58.43	101.3	+1.18	-2.0	.2168	100.3	+ .0284	+ 13.1
1896.	417	102.0	+ 66	+15.8	55.70	96.6	+3.91	-7.0	.2114	97.8	+ .0318	+ 14.7
1897.	402	98.3	+ 81	+20.1	58.02	100.6	+1.59	-2.7	.2920	93.5	+ .0412	+ 19.1
1898.	355	86.8	+128	+36.1	58.54	101.5	+1.07	-1.8	.2142	94.1	+ .0296	+ 13.7
1899.	396	96.8	+ 87	+22.0	58.14	100.8	-1.47	-2.5	.2052	95.0	+ .0380	+ 17.5
1900.	410	100.2	+ 73	+17.8	61.03	105.8	-1.42	-2.3	.2375	109.9	+ .0467	+ 21.6
1901.	426	101.2	+ 57	+13.4	59.60	103.3	- .01	- .02	.2385	110.4	+ .0447	+ 20.7
1902.	423	103.4	+ 60	+14.2	59.62	103.4	- .01	.02	.2497	115.5	+ .0485	+ 22.4
1903.	483	118.1			59.61	103.3			.2432	112.5		

ROLLERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages for 9 establishments, 1890-1899; 10 establishments, 1900; 11 establishments, 1901-1903.]

Av. 1890-99.	22	100.0	+ 1.	+ 4.5	60.72	100.0	- 0.66	- 1.1	\$0.3690	100.0	- \$0.1719	- 47.2
1890.	23	104.5			60.96	100.4	- .42	- .7	.3775	102.3	+ .0334	+ 9.1
1891.	22	100.0	+ 1.	+ 4.5	61.00	100.5	- .38	- .6	.3882	105.2	+ .0327	+ 8.9
1892.	21	95.5	+ 2.	+ 9.0	61.05	100.5	- .33	- .5	.3714	100.7	+ .0455	+ 12.5
1893.	22	100.0	+ 1.	+ 4.5	61.00	100.5	- .38	- .6	.3963	106.6	+ .0476	+ 13.8
1894.	21	102.1	+ 1.	+ 4.2	60.92	100.3	- .46	- .8	.3538	95.9	+ .0571	+ 15.9
1895.	22	100.0	+ 1.	+ 4.5	61.00	100.5	- .38	- .6	.3414	92.6	+ .0582	+ 16.3
1896.	21	95.5	+ 2.	+ 9.5	59.14	97.4	- 2.21	- 3.8	.3414	92.5	+ .0582	+ 16.3
1897.	22	100.0	+ 1.	+ 4.5	60.69	99.0	- 1.29	- 2.1	.3543	96.0	+ .0562	+ 15.4
1898.	22	100.0	+ 1.	+ 4.5	61.00	100.5	- .38	- .6	.3783	102.5	+ .0526	+ 14.5
1899.	22	100.0	+ 1.	+ 4.5	61.00	100.5	- .38	- .6	.3906	105.9	+ .0567	+ 15.3
1900.	23	104.5			62.59	103.1	- 1.21	- 1.9	.4133	130.4	+ .0586	+ 12.1
1901.	23	104.5			61.59	101.4	- .21	- .3	.4927	130.8	+ .0682	+ 12.1
1902.	23	104.5			61.38	101.1			.4880	135.0	+ .0629	+ 11.1
1903.	23	104.5			61.38	101.1			.5009	146.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

IRON AND STEEL, MUCK BAR—Concluded.

ROUGHERS, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1899; 6 establishments, 1899; 7 establishments, 1900; 8 establishments, 1901-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	13	100.0	+1	+ 7.7	58.23	100.0	+2.77	+4.8	\$0.3136	100.0	+\$0.0896	+ 28.6
1890	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3233	103.1	+.0799	+ 24.7
1891	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3202	102.1	+.0830	+ 25.9
1892	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3198	102.0	+.0834	+ 26.1
1893	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3128	99.7	+.0904	+ 28.9
1894	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3007	95.9	+.1025	+ 34.1
1895	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.2792	89.0	+.1210	+ 44.4
1896	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.2872	91.6	+.1160	+ 40.4
1897	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3027	95.5	+.1005	+ 33.2
1898	13	100.0	+1	+ 7.7	58.31	100.1	+2.69	+4.6	.3163	100.9	+.0869	+ 27.5
1899	12	92.3	+2	+16.7	57.50	98.7	+3.50	+6.1	.3740	119.3	+.0292	+ 7.8
1900	13	100.0	+1	+ 7.7	61.39	105.4	- .39	- .6	.3877	117.3	+.0355	+ 9.7
1901	13	100.0	+1	+ 7.7	61.32	105.3	- .32	- .5	.3943	116.2	+.0389	+ 10.7
1902	14	107.7			61.00	104.8			.3519	112.2	+.0513	+ 14.6
1903	11	107.7			61.00	104.8			.4032	128.6		

IRON AND STEEL, OPEN HEARTH STEEL.

LADLE LINERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1893; 4 establishments, 1894-1903.]

Av. 1890-99.	7	100.0	-2	-28.6	73.54	100.0	-0.21	-0.3	\$0.1980	100.0	+\$0.0905	+45.7
1890	7	100.0	-2	-28.6	73.71	100.2	- .38	- .5	.1941	98.0	+.0944	+48.6
1891	7	100.0	-2	-28.6	73.71	100.2	- .38	- .5	.1941	98.0	+.0944	+48.6
1892	7	100.0	-2	-28.6	73.71	100.2	- .38	- .5	.1941	98.0	+.0944	+48.6
1893	7	100.0	-2	-28.6	73.71	100.2	- .38	- .5	.1941	98.0	+.0944	+48.6
1894	7	100.0	-2	-28.6	73.50	99.9	- .17	- .2	.1790	90.4	+.1095	+61.2
1895	7	100.0	-2	-28.6	73.50	99.9	- .17	- .2	.2081	105.1	+.0804	+38.6
1896	7	100.0	-2	-28.6	73.50	99.9	- .17	- .2	.2029	102.5	+.0856	+42.2
1897	7	100.0	-2	-28.6	73.50	99.9	- .17	- .2	.1975	94.7	+.0910	+46.1
1898	7	100.0	-2	-28.6	73.33	99.7			.2040	103.0	+.0845	+41.4
1899	7	100.0	-2	-28.6	73.20	99.5	+ .13	+ .2	.2123	107.2	+.0762	+35.9
1900	5	71.4			73.50	99.9	- .17	- .2	.2548	128.7	+.0337	+13.2
1901	5	71.4			73.33	99.7			.2513	126.9	+.0372	+14.8
1902	5	71.4			73.33	99.7			.2558	129.2	+.0327	+12.8
1903	5	71.4			73.33	99.7			.2885	145.7		

LADLE MEN, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 9 establishments, 1890-1899; 10 establishments, 1900-1903.]

Av. 1890-99.	30	100.0	+1	+ 3.3	71.97	100.0	-0.39	+0.5	\$0.2045	100.0	+\$0.0531	+26.0
1890	30	100.0	+1	+ 3.3	71.60	99.5	+ .76	+1.1	.2321	113.5	+.0255	+11.0
1891	35	116.7	4	+11.4	71.66	99.6	+ .70	+1.0	.2137	105.5	+.0419	+19.4
1892	34	113.3	3	+ 8.8	71.65	99.6	+ .71	+1.0	.2058	100.6	+.0518	+25.2
1893	34	113.3	3	+ 8.8	71.65	99.6	+ .71	+1.0	.1961	96.0	+.0612	+31.2
1894	33	110.0	-2	- 6.1	71.64	99.5	+ .72	+1.0	.1845	90.2	+.0731	+39.6
1895	28	93.3	+3	+10.7	71.57	99.4	+ .79	+1.1	.3022	98.9	+.0554	+27.4
1896	24	80.0	-7	+29.2	72.50	100.7	- .14	- .2	.2114	103.4	+.0462	+21.9
1897	25	83.3	-6	+24.0	72.48	100.7	- .12	- .2	.1982	96.9	+.0594	+30.0
1898	26	86.7	-5	+19.2	72.16	100.7	- .10	- .1	.1943	95.0	+.0623	+32.6
1899	27	90.0	-4	+14.8	72.44	100.7	- .08	- .1	.2043	99.9	+.0533	+26.1
1900	25	83.3	-6	+24.0	72.11	100.7	- .08	- .1	.2377	116.2	+.0199	+ 8.4
1901	25	83.3	-6	+24.0	72.44	100.7	- .08	- .1	.2175	121.0	+.0101	+ 4.1
1902	27	90.0	+1	+14.8	72.41	100.6	- .05	- .1	.2553	124.8	+.0023	+ .9
1903	31	103.3			72.36	100.5			.2576	126.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

IRON AND STEEL, OPEN HEARTH STEEL—Concluded.

MELTERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from establishments, 1890-1899; 10 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	48	100.0	-	-9	73.87	100.0	+0.18	+0.2	\$0.3707	100.0	-\$0.0087	-2.3
1890	51	106.3	-12	-23.5	73.88	100.0	+ .17	+ .2	.3811	102.8	- .0085	-2.3
1891	56	116.7	-17	-30.4	73.50	99.5	+ .55	+ .7	.3915	105.6	- .0079	-2.1
1892	54	112.5	-15	-27.8	73.78	99.9	+ .27	+ .4	.3492	94.2	- .1102	-29.2
1893	56	116.7	-17	-30.4	73.71	99.8	+ .34	+ .5	.3178	85.8	- .1119	-30.2
1894	56	116.7	-17	-30.4	73.50	99.5	+ .55	+ .7	.3366	90.8	- .1228	-33.1
1895	40	83.3	-	-10	74.10	100.3	- .05	- .1	.3603	97.2	- .0099	-2.7
1896	42	87.5	-	-3	74.00	100.2	+ .05	+ .1	.3643	98.3	- .0084	-2.3
1897	39	81.3	-	-11	74.15	100.4	- .10	- .1	.3770	101.7	- .0084	-2.3
1898	40	83.3	-	-10	74.10	100.3	- .05	- .1	.3895	105.1	- .0084	-2.3
1899	43	89.6	-	-4	73.95	100.1	+ .10	+ .1	.4098	110.5	- .0088	-2.4
1900	42	87.5	-	-3	73.91	100.1	+ .14	+ .2	.4371	117.9	- .0223	-5.9
1901	42	87.5	-	-3	73.91	100.1	+ .14	+ .2	.4459	120.3	- .0155	-4.2
1902	41	85.4	-	-2	73.95	100.1	+ .10	+ .1	.4581	123.6	- .0015	-.4
1903	39	81.3	-	-11	74.05	100.2	-	-	.4594	123.9	-	-

MELTERS' HELPERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from establishments, 1890-1899; 10 establishments, 1900-1903.]

Year.	Num-ber.	Rela-tive num-ber.	Num-ber.	Per-cent.	Average num-ber.	Rela-tive num-ber.	Num-ber.	Per-cent.	Average.	Rela-tive.	Amount.	Per-cent.
Av. 1890-99.	121	100.0	41	33.1	71.99	100.0	+0.07	+0.1	\$0.2085	100.0	-\$0.0087	-4.2
1890	97	78.2	-61	-70.1	72.62	100.9	-.56	-.8	.2100	100.7	- .0087	-4.2
1891	110	88.7	-55	-50.0	72.11	100.2	-.05	-.1	.2110	101.2	- .0087	-4.2
1892	108	87.1	-57	-52.8	72.11	100.2	-.05	-.1	.2015	96.6	- .0097	-4.7
1893	112	90.3	-53	-47.3	72.11	100.2	-.05	-.1	.2026	97.2	- .0097	-4.7
1894	110	88.7	-55	-50.0	72.11	100.2	-.05	-.1	.1800	86.3	- .1172	-28.4
1895	122	98.4	-43	-35.2	72.10	100.2	-.04	-.1	.1946	93.3	- .1075	-26.2
1896	115	110.5	-28	-20.4	71.74	99.7	-.32	+ .1	.2160	103.6	- .0082	-2.1
1897	115	107.3	-32	-24.1	71.75	99.6	-.33	-.5	.2150	103.1	- .0082	-2.1
1898	141	115.7	-24	-17.0	71.74	99.7	-.32	-.4	.2111	101.2	- .0081	-2.1
1899	146	120.9	-1	-6	71.49	99.3	-.57	-.8	.2436	116.8	- .0081	-2.1
1900	168	138.5	-3	-1.8	71.55	99.4	-.51	-.7	.2621	125.7	- .0083	-2.1
1901	170	137.1	-5	-2.9	71.60	99.5	-.46	-.6	.2521	120.9	- .0151	-3.7
1902	170	137.1	-5	-2.9	71.61	99.5	-.45	-.6	.2816	135.1	- .0150	-3.7
1903	166	133.1	-9	-5.1	71.06	100.1	-	-	.2972	142.5	-	-

PITMEN, Male.

[Data for employees from 8 establishments for entire period. Data for hours and wages from establishments, 1890-1899; 9 establishments, 1900-1903.]

Year.	Num-ber.	Rela-tive num-ber.	Num-ber.	Per-cent.	Average num-ber.	Rela-tive num-ber.	Num-ber.	Per-cent.	Average.	Rela-tive.	Amount.	Per-cent.
Av. 1890-99.	86	100.0	1	1.2	75.06	100.0	0.82	+1.1	\$0.1571	100.0	-\$0.0027	-1.7
1890	81	94.2	-6	-7.1	74.11	98.7	-.15	-.2	.1717	109.3	- .0184	-11.7
1891	93	108.1	-6	-6.9	73.15	97.4	-.32	-.4	.1696	108.0	- .0202	-12.9
1892	96	111.6	-9	-9.4	72.88	97.1	-.60	-.8	.1584	100.8	- .0314	-19.9
1893	94	109.4	-7	-7.4	72.64	96.6	-.84	-1.2	.1570	99.9	- .0325	-20.7
1894	82	95.3	-	-6.1	73.0	97.0	-.46	-.6	.1432	91.2	- .0469	-29.9
1895	79	91.9	-	-10.1	72.6	96.7	1.02	-1.4	.1479	94.1	- .0419	-27.3
1896	86	100.0	-1	-1.2	72.42	96.7	1.06	-1.5	.1601	99.4	- .0387	-24.6
1897	80	93.0	-	-8.8	72.15	96.3	1.23	-1.8	.1512	96.2	- .0086	-5.5
1898	82	95.3	-	-6.1	72.44	96.7	1.04	-1.4	.1519	96.7	- .0079	-5.1
1899	91	105.8	-1	-1.4	72.15	96.3	1.23	-1.9	.1637	104.2	- .0261	-16.6
1900	87	101.2	-	-7.1	72.15	96.3	1.23	-1.9	.1746	111.1	- .0152	-9.7
1901	88	102.3	-1	-1.4	71.87	95.9	1.61	-2.2	.1728	110.0	- .0170	-10.8
1902	81	94.2	-6	-7.1	71.86	95.9	1.62	-2.3	.1844	117.4	- .0054	-.3
1903	87	101.2	-	-7.1	71.48	101.1	-	-	.1898	120.8	-	-

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 714.]

IRON AND STEEL, RAILS.

CATCHERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	1	100.0			72.00	100.0			\$0.3391	100.0	+\$0.2506	+ 73.9
1890	1	100.0			72.00	100.0			.3526	104.0	+	.2871 + 67.2
1891	1	100.0			72.00	100.0			.3718	109.6	+	.2179 + 58.6
1892	1	100.0			72.00	100.0			.3846	113.4	+	.3051 + 53.3
1893	1	100.0			72.00	100.0			.3141	92.6	+	.2756 + 87.7
1894	1	100.0			72.00	100.0			.3333	98.3	+	.2564 + 76.9
1895	1	100.0			72.00	100.0			.3526	104.0	+	.2871 + 67.2
1896	1	100.0			72.00	100.0			.3526	104.0	+	.2871 + 67.2
1897	1	100.0			72.00	100.0			.3333	98.3	+	.2564 + 76.9
1898	1	100.0			72.00	100.0			.3077	90.7	+	.2820 + 91.6
1899	1	100.0			72.00	100.0			.2895	85.1	+	.3012 + 104.4
1900	1	100.0			72.00	100.0			.5513	162.6	+	.3884 + 7.0
1901	1	100.0			72.00	100.0			.5256	155.0	+	.0641 + 12.2
1902	1	100.0			72.00	100.0			.6026	177.7	+	.0129 - 2.1
1903	1	100.0			72.00	100.0			.5897	173.9		

CHARGERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	9	100.0			68.80	100.0	+ 3.20	+ 4.7	\$0.2111	100.0	+\$0.0402	+19.0
1890	9	100.0			56.00	81.4	+16.00	+28.6	.2428	115.0	+	.0085 + 3.5
1891	9	100.0			56.00	81.4	+16.00	+28.6	.2136	101.1	+	.0378 + 17.7
1892	7	77.8	+2	+28.6	72.00	104.7			.3033	143.7	+	.0520 + 17.1
1893	7	77.8	+2	+28.6	72.00	104.7			.2058	97.5	+	.0455 + 22.1
1894	9	100.0			72.00	104.7			.1956	92.7	+	.0557 + 28.5
1895	9	100.0			72.00	104.7			.1996	94.6	+	.0517 + 25.9
1896	9	100.0			72.00	104.7			.2123	100.6	+	.0890 + 18.4
1897	9	100.0			72.00	104.7			.1587	75.2	+	.0926 + 58.3
1898	9	100.0			72.00	104.7			.1851	87.8	+	.0659 + 33.5
1899	9	100.0			72.00	104.7			.1911	91.9	+	.0572 + 29.5
1900	9	100.0			72.00	104.7			.2497	118.3	+	.0016 + .6
1901	9	100.0			72.00	104.7			.2194	118.1	+	.0019 + .8
1902	9	100.0			72.00	104.7			.2743	129.9	+	.0230 + 8.4
1903	9	100.0			72.00	104.7			.2513	119.0		

HEATERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	11	100.0	+1	+ 9.1	69.18	100.0	-3.18	-4.6	\$0.4136	100.0	+\$0.1261	+30.6
1890	13	118.2	-1	- 7.7	60.92	88.1	+5.08	+8.3	.5388	130.5	+	.0006 + .1
1891	13	118.2	-1	- 7.7	60.92	88.1	+5.08	+8.3	.4572	110.7	+	.0822 + 18.0
1892	7	63.6	+5	+71.4	72.00	104.1	- 6.00	- 8.3	.4778	115.7	+	.0616 + 12.9
1893	7	63.6	+5	+71.4	72.00	104.1	- 6.00	- 8.3	.3853	93.3	+	.1511 + 40.0
1894	11	100.0	1	+ 9.1	72.00	104.1	- 6.00	- 8.3	.3668	88.8	+	.1726 + 47.1
1895	11	100.0	1	+ 9.1	72.00	104.1	- 6.00	- 8.3	.4230	102.4	+	.1161 + 27.5
1896	11	100.0	1	+ 9.1	72.00	104.1	- 6.00	- 8.3	.4110	100.8	+	.0884 + 22.3
1897	11	100.0	-1	- 9.1	72.00	104.1	6.00	8.3	.3385	82.0	+	.2069 + 59.4
1898	11	100.0	1	+ 9.1	72.00	104.1	6.00	- 8.3	.3552	86.0	+	.1842 + 51.9
1899	12	109.1			66.00	95.4			.3468	84.0	+	.1926 + 55.5
1900	12	109.1			66.00	95.4			.5199	125.9	+	.0195 + 3.8
1901	12	109.1			66.00	95.4			.4948	119.8	+	.0146 + 9.0
1902	12	109.1			66.00	95.4			.5828	141.1	+	.0134 + 7.4
1903	12	109.1			66.00	95.4			.5394	130.6		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

IRON AND STEEL, RAILS—Continued.

LEVER MEN, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	7	100.0	+2	+28.6	68.60	100.0	-12.60	-18.4	\$0.2623	100.0	-\$0.1077	-40
1890	8	114.3	+1	+12.5	63.00	91.8	-7.00	-11.1	.3055	116.5	-.0645	-24
1891	8	114.3	+1	+12.5	63.00	91.8	-7.00	-11.1	.2563	97.7	-.1137	-44
1892	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2948	112.4	-.0752	-28
1893	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2578	98.3	-.1122	-41
1894	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2503	95.4	-.1197	-45
1895	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2657	108.9	-.0843	-32
1896	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2686	102.4	-.1014	-38
1897	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2351	89.6	-.1349	-51
1898	7	100.0	+2	+28.6	72.00	105.0	-16.00	-22.2	.2367	90.2	-.1358	-50
1899	9	128.6			56.00	81.6			.2322	88.5	-.1378	-52
1900	9	128.6			56.00	81.6			.3125	119.1	-.0575	-22
1901	9	128.6			56.00	81.6			.3412	130.1	-.0288	-11
1902	9	128.6			56.00	81.6			.4088	155.9	-.0588	-22
1903	9	128.6			56.00	81.6			.3700	141.1		

ROLLERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	5	100.0	+1	+20.0	70.80	100.0	-10.80	-15.3	\$0.5184	100.0	-\$0.2075	-40
1890	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.6067	117.0	-.1192	-24
1891	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.5504	106.2	-.1755	-34
1892	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.5578	103.7	-.1881	-36
1893	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.5633	108.7	-.1625	-31
1894	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.5084	98.1	-.2175	-42
1895	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.4871	94.0	-.2388	-46
1896	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.4717	95.9	-.2588	-49
1897	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.4717	95.9	-.2588	-49
1898	5	100.0	+1	+20.0	72.00	101.7	-12.00	-16.7	.4661	89.9	-.2598	-50
1899	6	120.0			60.00	84.7			.4953	95.5	-.2307	-43
1900	6	120.0			60.00	84.7			.6129	118.2	-.1130	-25
1901	6	120.0			60.00	84.7			.6722	129.7	-.0557	-11
1902	6	120.0			60.00	84.7			.7709	149.9	-.0510	-10
1903	6	120.0			60.00	84.7			.7259	140.0		

ROUGHERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	3	100.0			68.40	100.0	+3.60	+5.3	\$0.3744	100.0	-\$0.0244	-6
1890	4	133.3	1	25.0	54.00	78.9	18.00	+26.3	.4704	125.6	-.0924	-24
1891	4	133.3	1	25.0	54.00	78.9	18.00	+26.3	.3194	85.3	-.1544	-41
1892	3	100.0			72.00	105.3			.4015	107.2	-.0823	-21
1893	3	100.0			72.00	105.3			.3769	100.7	-.0769	-20
1894	3	100.0			72.00	105.3			.3799	101.5	-.0799	-21
1895	3	100.0			72.00	105.3			.4200	113.8	-.0722	-19
1896	3	100.0			72.00	105.3			.4187	113.8	-.0719	-19
1897	3	100.0			72.00	105.3			.2759	73.7	-.1279	-34
1898	3	100.0			72.00	105.3			.2899	77.4	-.1199	-33
1899	3	100.0			72.00	105.3			.3254	86.9	-.0784	-21
1900	3	100.0			72.00	105.3			.4636	124.8	-.0598	-12
1901	3	100.0			72.00	105.3			.4101	117.6	-.0566	-15
1902	3	100.0			72.00	105.3			.4042	134.7	-.1004	-29
1903	3	100.0			72.00	105.3			.4038	107.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

IRON AND STEEL, RAILS—Concluded.

STRAIGHTENERS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	29	100.0	+10	+34.5	63.01	100.0	+ 2.22	+ 3.5	\$0.3778	100.0	+\$0.0495	+13.1
1890	26	89.7	+13	+50.0	56.31	89.4	+ 8.92	+15.8	.4567	120.9	+.0294	- 6.4
1891	26	89.7	+13	+50.0	56.31	89.4	+ 8.92	+15.8	.3951	104.6	+.0322	+ 8.1
1892	26	89.7	+13	+50.0	64.62	102.6	+ .61	+ .9	.4317	114.3	-.0044	- 1.0
1893	26	89.7	+13	+50.0	64.62	102.6	+ .61	+ .9	.3988	105.6	+.0285	+ 7.1
1894	26	89.7	+13	+50.0	64.62	102.6	+ .61	+ .9	.3739	99.0	+.0534	+14.3
1895	28	96.6	+11	+39.3	65.14	103.4	+ .09	+ .1	.3589	95.0	+.0684	+19.1
1896	31	106.9	+ 8	+25.8	61.26	102.0	+ .97	+ 1.5	.3657	96.8	+.0616	+16.8
1897	31	106.9	+ 8	+25.8	64.26	102.0	+ .97	+ 1.5	.3529	93.4	+.0744	+21.1
1898	31	106.9	+ 8	+25.8	64.26	102.0	+ .97	+ 1.5	.3306	87.5	+.0667	+29.2
1899	38	131.0	+ 1	+ 2.6	65.68	104.2	- .45	- .7	.3139	83.1	+.1134	+36.1
1900	39	134.5			65.23	103.5			.3465	91.7	+.0808	+23.3
1901	39	134.5			65.23	103.5			.3891	103.0	+.0382	+ 9.8
1902	39	134.5			65.23	103.5			.4362	115.5	-.0089	- 2.0
1903	39	134.5			65.23	103.5			.4273	113.1		

LEATHER.

COLORERS, Male.

[Data from 14 establishments.]

Av. 1890-99.	106	100.0	+ 5	+ 4.7	59.41	100.0	- 0.25	- 0.4	\$0.1539	100.0	+\$0.0163	+10.6
1890	100	94.3	+11	+11.0	59.47	100.1	- .31	- .5	.1468	95.4	+.0234	+15.9
1891	97	91.5	+14	+14.4	59.40	100.0	- .24	- .4	.1494	97.1	+.0208	+13.9
1892	118	111.3	- 7	- 5.9	59.24	99.7	- .08	- .1	.1511	98.2	+.0191	+12.6
1893	79	74.5	- 32	- 40.5	59.52	100.2	- .36	- .6	.1535	99.7	+.0167	+10.9
1894	126	118.9	-15	-11.9	59.37	99.9	- .21	- .4	.1515	98.4	+.0187	+12.3
1895	117	110.4	- 6	- 5.1	59.33	99.9	- .17	- .3	.1527	99.2	+.0175	+11.5
1896	86	81.1	-25	-29.1	59.45	100.1	- .29	- .5	.1584	102.9	+.0118	+ 7.4
1897	94	88.7	-17	-18.1	59.48	100.1	- .32	- .5	.1622	105.4	+.0080	+ 4.9
1898	108	101.9	+ 3	+ 2.8	59.48	100.1	- .32	- .5	.1576	102.4	+.0126	+ 8.0
1899	134	126.4	-23	-17.2	59.35	99.9	- .19	- .3	.1558	101.2	+.0144	+ 9.2
1900	127	119.8	-16	-12.6	59.40	100.0	- .24	- .4	.1595	103.6	+.0107	+ 6.7
1901	111	104.7			59.24	99.7	- .08	- .1	.1625	105.6	+.0077	+ 4.7
1902	101	95.3	-10	+ 9.9	59.13	99.5	+ .03	+ .1	.1677	109.0	+.0025	+ 1.5
1903	111	104.7			59.16	99.6			.1702	110.6		

FLESHERS, Male.

[Data for employees from 31 establishments for entire period. Data for hours and wages from 31 establishments, 1890, 1891; 32 establishments, 1892-1903.]

Av. 1890-99.	182	100.0	+40	-22.0	59.37	100.0	+ 0.40	- 0.7	\$0.1720	100.0	+\$0.0092	+ 5.3
1890	189	103.8	+33	-17.5	59.39	100.0	+ .38	+ .6	.1819	105.8	-.0007	- 0.4
1891	180	98.9	+42	+23.3	59.33	99.9	+ .41	+ .7	.1799	104.6	+.0012	+ 0.7
1892	193	106.0	+29	+15.0	59.33	99.9	+ .41	+ .7	.1793	104.4	+.0017	+ 0.9
1893	180	98.9	+42	+23.3	59.38	100.0	+ .39	+ .7	.1796	103.8	+.0026	+ 1.5
1894	179	98.4	+43	+24.0	59.35	100.0	+ .42	+ .7	.1672	97.2	+.0140	+ 8.1
1895	188	103.3	+34	+18.1	59.41	100.1	+ .36	+ .6	.1646	95.7	+.0166	+10.1
1896	172	94.5	+50	+29.1	59.40	100.1	+ .37	+ .6	.1689	98.2	+.0123	+ 7.3
1897	170	93.4	+52	+30.6	59.43	100.1	+ .34	+ .6	.1653	96.1	+.0150	+ 9.6
1898	172	94.5	+50	+29.1	59.43	100.1	+ .34	+ .6	.1672	97.2	+.0140	+ 8.1
1899	200	109.9	+22	+11.0	59.29	99.9	+ .48	+ .8	.1673	97.3	+.0139	+ 8.3
1900	194	106.6	+26	+14.4	59.34	99.9	+ .43	+ .7	.1738	101.0	+.0074	+ 4.3
1901	191	104.9	+31	+16.2	59.36	100.0	+ .41	+ .7	.1761	102.4	+.0051	+ 2.9
1902	203	111.5	+19	+ 9.4	59.87	100.0	+ .40	+ .7	.1779	103.4	+.0033	+ 1.9
1903	222	122.0			59.77	100.7			.1812	105.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

LEATHER—Continued.

GLAZERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages for 10 establishments, 1890, 1891; 9 establishments, 1892, 1893; 10 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase or decrease in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	
Av. 1890-99.	189	100.0	+135	+ 71.1	53.15	100.0	+0.11	+0.2	\$0.1517	100.0	-\$0.0475	
1890	111	58.7	+213	+191.9	59.07	99.9	+ .22	+ .4	.1498	97.8	-.0420	
1891	147	77.8	+177	+120.4	59.09	99.9	+ .20	+ .3	.1463	96.4	-.0570	
1892	164	86.8	+160	+ 97.6	59.02	99.8	+ .27	+ .5	.1422	98.1	-.0481	
1893	141	74.6	+183	+129.8	59.06	99.8	+ .23	+ .4	.1385	91.3	-.0588	
1894	195	103.2	+129	+ 66.2	59.09	99.9	+ .20	+ .3	.1456	96.0	-.0517	
1895	191	101.1	+135	+ 69.6	59.19	100.1	+ .10	+ .2	.1511	106.2	-.0362	
1896	213	128.6	+ 81	+ 33.3	59.25	100.2	+ .14	+ .1	.1530	100.9	-.0441	
1897	239	126.5	+ 85	+ 35.6	59.28	100.2	+ .01	+ .1	.1534	101.1	-.0425	
1898	208	110.1	+116	+ 55.8	59.24	100.2	+ .05	+ .1	.1602	105.6	-.0371	
1899	254	134.4	+ 70	+ 27.6	59.16	100.0	+ .13	+ .2	.1615	106.5	-.0358	
1900	269	142.3	+ 55	+ 20.4	59.16	100.0	+ .13	+ .2	.1594	105.1	-.0379	
1901	252	133.3	+ 72	+ 28.6	59.25	100.2	+ .04	+ .1	.1537	114.5	-.0259	
1902	241	127.5	+ 85	+ 34.1	59.18	100.1	+ .11	+ .2	.1588	117.5	-.0150	
1903	324	171.4			59.29	100.2			.1573	130.1		

GLAZERS, Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages for 2 establishments, 1890, 1891; 2 establishments, 1892-1894; 3 establishments, 1895-1903.]

Av. 1890-99.	4	100.0	58	141.5	59.97	100.0			\$0.0801	100.0	-\$0.0192	
1890	7	17.1	92	131.1	60.00	100.1	0.00	0.1	.0810	101.1	-.0192	
1891	19	46.7	180	131.1	60.00	100.1	+ .03	+ .1	.0789	98.5	-.0221	
1892	29	71.8	79	195.0	60.00	100.1	+ .03	+ .1	.0758	94.6	-.0244	
1893	5	12.2	191	188.0	60.00	100.1	+ .03	+ .1	.0741	92.5	-.0257	
1894	13	31.4	159	800.0	60.00	100.1	+ .03	+ .1	.0786	98.1	-.0221	
1895	35	86.4	164	182.9	59.92	99.9	+ .05	+ .1	.0785	97.8	-.0210	
1896	28	68.5	71	263.6	59.93	99.9	+ .04	+ .1	.0822	105.4	-.0130	
1897	45	110.8	91	120.0	59.94	99.9	+ .03	+ .1	.0872	108.9	-.0100	
1898	149	365.1	50	134.6	59.96	100.0	+ .01	+ .02	.0781	97.5	-.0221	
1899	25	61.7	91	142.9	59.91	99.9	+ .03	+ .1	.0826	104.4	-.0164	
1900	147	365.0	8	7.5	59.96	100.0	+ .01	+ .02	.0859	107.2	-.0141	
1901	87	212.2	12	14.8	59.97	100.0			.0823	118.5	-.0099	
1902	94	233.3	50	134.6	59.96	100.0	+ .02	+ .03	.1011	128.6	-.0012	
1903	99	241.6			59.95	100.0			.1012	128.1		

LIVENES, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages for 2 establishments, 1890, 1891; 2 establishments, 1892-1903.]

Av. 1890-99.	56	100.0	59	184.1	59.96	100.0	0.00	0.1	\$0.1587	100.0	-\$0.0192	
1890	21	39.9	79	164.1	59.77	99.6	+ .24	+ .7	.1675	105.5	-.0014	
1891	68	96.7	96	164.1	59.78	99.6	+ .23	+ .7	.1643	103.5	-.0046	
1892	70	124.7	116	164.1	59.77	99.6	+ .26	+ .6	.1635	104.3	-.0034	
1893	77	137.7	114	164.1	59.77	99.6	+ .26	+ .7	.1621	102.8	-.0058	
1894	176	311.6	178	164.1	59.8	99.8	+ .29	+ .5	.1562	98.1	-.0127	
1895	18	38.4	96	164.1	59.77	100.1	+ .24	+ .7	.1551	97.9	-.0145	
1896	179	319.7	97	164.1	59.77	100.1	+ .26	+ .7	.1525	96.1	-.0164	
1897	147	261.9	79	164.1	59.77	100.0	+ .24	+ .7	.1516	95.5	-.0173	
1898	144	256.8	79	164.1	59.77	100.0	+ .24	+ .7	.1520	95.8	-.0169	
1899	29	51.4	1	26.4	59.79	100.1	+ .08	+ .1	.1596	99.9	-.0105	
1900	221	392.1	17	21.2	59.81	100.3	+ .11	+ .2	.1617	101.9	-.0072	
1901	244	429.8	17	17.9	59.77	100.0	+ .16	+ .3	.1609	101.4	-.0080	
1902	249	438.9	17	16.8	59.75	100.0	+ .11	+ .2	.1608	103.1	-.0021	
1903	276	488.1			59.77	100.3			.1609	108.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LEATHER—Continued.

ROLLERS, Male.

[Data from 6 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.				
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.		
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.	
Av. 1890-99.	19	100.0	+	-21.1	59.83	100.0			\$0.1415	100.0	+\$0.0086	+6.1	
1890	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1415	100.0	+	.0086	+6.1
1891	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1415	100.0	+	.0086	+6.1
1892	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1415	100.0	+	.0086	+6.1
1893	19	100.0	+	-21.1	59.81	100.0	-0.01	-0.02	.1409	99.6	+	.0092	+6.5
1894	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1409	99.6	+	.0092	+6.5
1895	20	105.3	+	-15.0	59.80	99.9	-0.03	+1	.1430	101.1	+	.0071	+5.0
1896	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1409	99.6	+	.0092	+6.5
1897	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1409	99.6	+	.0092	+6.5
1898	19	100.0	+	-21.1	59.84	100.0	-0.01	-0.02	.1409	99.6	+	.0092	+6.5
1899	20	105.3	+	-15.0	59.80	99.9	+0.03	+1	.1430	101.1	+	.0071	+5.0
1900	21	110.5	+	-9.5	59.81	100.0	+0.02	+0.03	.1418	100.2	+	.0083	+5.9
1901	23	121.1			59.83	100.0			.1465	103.5	+	.0086	+6.1
1902	23	121.1			59.83	100.0			.1501	106.1			
1903	23	121.1			59.83	100.0			.1501	106.1			

SETTERS OUT, Male.

[Data from 15 establishments.]

Av. 1890-99.	268	100.0	+ 40.	+11.9	59.37	100.0	-0.23	-0.1	\$0.1553	100.0	+\$0.0086	+ 5.6	
1890	225	84.0	+ 83	+36.9	59.50	100.2	- .36	- .6	.1609	103.6	+	.0089	+ 1.9
1891	246	91.8	+ 62	+25.2	59.45	100.1	- .31	- .5	.1600	103.0	+	.0089	+ 2.4
1892	314	117.2	- 6	-1.9	59.36	100.0	- .22	- .4	.1532	98.6	+	.0107	+ 7.0
1893	179	66.8	+129	+72.1	59.65	100.5	- .51	- .9	.1674	107.8	-	.0035	- 2.1
1894	312	116.4	- 4	-1.3	59.33	99.9	- .19	- .3	.1498	96.5	+	.0141	+ 9.4
1895	286	106.7	+ 22	+7.7	59.35	100.0	- .21	- .4	.1499	96.5	+	.0140	+ 9.3
1896	170	63.4	+138	+81.2	59.41	100.1	- .30	- .5	.1552	99.9	+	.0087	+ 5.6
1897	317	118.3	- 9	-2.8	59.28	99.8	- .14	- .2	.1505	96.9	+	.0134	+ 8.9
1898	288	107.5	+ 20	+6.9	59.29	99.9	- .15	- .3	.1482	95.4	+	.0157	+10.6
1899	341	127.2	- 33	-9.7	59.02	99.4	+ .12	+ .2	.1583	101.9	+	.0056	+ 3.5
1900	333	124.3	- 25	-7.5	59.09	99.5	+ .05	+ .1	.1577	101.5	+	.0082	+ 3.9
1901	351	131.0	- 43	-12.3	59.13	99.6	+ .01	+ .02	.1598	103.0	+	.0040	+ 2.5
1902	327	122.0	- 19	-5.8	59.14	99.6			.1585	102.7	+	.0041	+ 2.8
1903	308	114.9			59.14	99.6			.1639	105.5			

SHAVERS, Male.

[Data from 16 establishments.]

Av. 1890-99.	90	100.0	+	8	+ 8.9	59.41	100.0	- 0.15	+ 0.3	\$0.2323	100.0	- \$0.0133	- 5.7	
1890	86	95.6	+	12	+ 11.0	59.64	100.4	- 0.08	- 1	.2307	112.2	- .0417	- 16.0	
1891	104	115.6	-	6	- 5.8	59.70	100.5	- 0.14	- 2	.2348	114.0	- .0458	- 17.3	
1892	103	114.4	-	5	- 4.9	59.67	100.4	- 0.11	- 2	.2300	111.9	- .0410	- 15.8	
1893	87	96.7	+	11	+ 12.6	59.18	99.6	+ 0.38	+ 6	.2372	115.0	- .0482	- 18.0	
1894	88	97.8	+	10	+ 11.4	59.14	99.5	+ 0.42	+ 7	.2316	101.0	- .0156	- 6.6	
1895	85	94.4	+	13	+ 15.3	59.12	99.5	+ 0.44	+ 7	.2259	97.2	- .0089	- 3.1	
1896	71	78.9	-	27	- 38.0	58.92	99.2	+ 0.64	+ 1.1	.2068	89.0	+	.0122	+ 5.9
1897	79	87.8	+	19	+ 24.1	59.57	100.3	- 0.01	- .02	.2100	86.5	+	.0180	+ 9.0
1898	100	111.1	-	2	- 2.0	59.62	100.4	- 0.06	- 1	.1968	84.7	+	.0222	- 11.3
1899	94	104.4	+	1	+ 4.3	59.54	100.2	+ 0.02	+ .03	.2050	89.2	+	.0140	+ 6.8
1900	101	112.2	-	3	- 3.0	59.59	100.3	- 0.03	- 1	.2032	87.5	+	.0158	+ 7.8
1901	102	113.3	-	4	- 3.9	59.55	100.2	+ 0.01	+ .02	.2077	89.4	-	.0113	- 5.4
1902	88	97.8	+	10	+ 11.4	59.57	100.3	- 0.01	- .02	.2143	92.3	-	.0047	- 2.2
1903	98	108.9				59.56	100.3			.2190	94.3			

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

LEATHER—Concluded.

STAKERS, Male.

[Data from 8 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	167	100.0	-27	-16.2	59.20	100.0	+0.16	+0.3	\$0.2384	100.0	-\$0.0621	-26.1
1890	116	69.5	+24	+20.7	59.24	100.1	+ .12	+ .2	.2150	92.1	-.0437	-18.3
1891	149	89.2	-9	-6.0	59.17	99.9	+ .19	+ .3	.2353	100.8	-.0640	-27.2
1892	188	112.6	-48	-25.5	59.12	99.9	+ .24	+ .4	.2458	105.3	-.0745	-30.8
1893	178	106.6	-38	-21.3	59.14	99.9	+ .22	+ .4	.2450	105.0	-.0737	-30.7
1894	174	104.2	-34	-19.5	59.19	100.0	+ .17	+ .3	.2382	102.1	-.0629	-26.4
1895	186	111.4	-46	-24.7	59.18	100.0	+ .18	+ .3	.2389	102.4	-.0676	-28.8
1896	150	89.8	-10	-6.7	59.19	100.0	+ .17	+ .3	.2335	100.0	-.0622	-26.1
1897	161	96.4	-21	-13.0	59.26	100.1	+ .10	+ .2	.2240	96.0	-.0527	-22.1
1898	179	107.2	-39	-21.8	59.30	100.2	+ .06	+ .1	.2215	94.9	-.0392	-16.4
1899	191	114.4	-51	-26.7	59.18	100.0	+ .18	+ .3	.2371	101.6	-.0658	-27.6
1900	144	86.2	-4	-2.8	59.26	100.1	+ .10	+ .2	.1671	71.6	-.0042	-1.7
1901	206	123.4	-66	-32.0	59.26	100.1	+ .10	+ .2	.1784	76.5	-.0071	-2.9
1902	130	77.8	+10	+ 7.7	59.33	100.2	+ .03	+ .1	.1729	74.1	-.0016	-.6
1903	140	83.8			59.36	100.3			.1713	73.4		

TANNERS, Male.

[Data from 19 establishments.]

Av. 1890-99.	444	100.0	+61	+13.7	59.08	100.0	+0.15	+0.3	\$0.1366	100.0	+\$0.0097	+7.1
1890	407	91.7	+98	+24.1	58.79	99.5	+ .44	+ .7	.1414	103.5	+.0049	+3.6
1891	411	92.6	+94	+22.9	58.63	99.2	+ .60	+1.0	.1436	105.1	+.0027	+1.9
1892	452	101.8	-53	-11.7	58.73	99.4	+ .50	+ .8	.1439	105.3	+.0024	+1.8
1893	455	102.5	-50	-11.0	58.85	99.6	+ .38	+ .6	.1418	103.8	+.0045	+3.3
1894	434	97.7	-71	-16.4	58.92	99.7	+ .31	+ .5	.1342	98.2	-.0121	-8.9
1895	438	98.6	-67	-15.3	59.06	100.0	+ .17	+ .3	.1320	96.6	-.0143	-10.5
1896	412	92.8	-93	-22.6	59.21	100.2	+ .02	+ .03	.1325	97.0	-.0138	-10.3
1897	435	98.0	-70	-16.1	59.45	100.6	+ .22	+ .4	.1336	97.8	-.0127	-9.2
1898	494	111.3	+11	+ 2.2	59.71	101.1	+ .48	+ .8	.1304	95.5	-.0159	-11.6
1899	499	112.4	+ 6	+ 1.2	59.40	100.5	+ .17	+ .3	.1325	97.0	-.0138	-10.3
1900	483	108.8	-22	-4.6	59.37	100.5	+ .14	+ .2	.1369	100.2	+.0094	+6.9
1901	506	114.0	-1	-.2	59.40	100.5	+ .17	+ .3	.1379	101.0	+.0094	+6.9
1902	484	109.0	-21	-4.3	59.37	100.5	+ .14	+ .2	.1428	104.5	+.0035	+2.5
1903	505	113.7			59.23	100.3			.1463	107.1		

UNHAIRERS, Male.

[Data from 11 establishments.]

Av. 1890-99.	179	100.0	+48	+26.8	59.39	100.0	+0.13	-0.2	\$0.1561	100.0	+\$0.0091	+5.8
1890	164	91.6	-63	-38.4	59.10	99.5	+ .16	+ .3	.1648	105.6	+.0004	+.3
1891	160	89.4	-67	-41.9	59.13	99.6	+ .13	+ .2	.1630	104.4	+.0022	+1.4
1892	171	95.5	-56	-32.7	59.02	99.4	+ .24	+ .4	.1630	104.4	+.0022	+1.4
1893	185	103.4	-42	-23.7	59.05	99.4	+ .21	+ .4	.1592	102.0	+.0040	+2.6
1894	170	95.0	-57	-31.5	59.18	99.6	+ .08	+ .1	.1492	95.6	-.0140	-9.0
1895	169	94.4	-58	-34.3	59.59	100.2	+ .24	+ .4	.1508	96.6	-.0144	-9.2
1896	183	102.2	-44	-24.0	59.31	99.9	+ .05	+ .1	.1526	98.4	-.0117	-7.5
1897	191	106.7	-56	-31.8	59.87	100.8	+ .61	+1.0	.1576	97.7	-.0086	-5.5
1898	201	112.3	-26	-12.9	59.88	100.8	+ .62	+1.0	.1517	97.2	-.0125	-8.0
1899	195	108.9	-32	-16.4	59.86	100.8	+ .60	+1.0	.1498	96.0	-.0154	-9.9
1900	205	114.5	-22	-10.7	59.82	100.7	+ .57	+1.0	.1547	99.1	-.0105	-6.7
1901	222	124.0	+ 5	+ 2.3	59.87	100.8	+ .61	+1.0	.1579	101.2	-.0073	-4.6
1902	231	129.1	-4	-1.7	59.83	100.7	+ .57	+1.0	.1619	105.6	+.0003	+.2
1903	227	126.8			59.26	99.8			.1652	105.8		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

LIQUORS, DISTILLED.

COOKER MEN, Male.

[Data from 2 establishments.]

Year.	Employees.		Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average.	Rela-tive.
			Num-ber.	Per cent.			Num-ber.	Per cent.		
Av. 1890-99.	3	100.0	+1	+ 33.3	64.20	100.0	-1.20	-1.9	\$0.1804	100.0
1890.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1891.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1892.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1893.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1894.	2	66.7	+2	+100.0	66.00	102.8	-3.00	-4.5	.1868	101.5
1895.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1896.	2	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1801	99.8
1897.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1736	96.2
1898.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1736	96.2
1899.	3	100.0	+1	+ 33.3	64.00	99.7	-1.00	-1.6	.1847	102.4
1900.	2	66.7	+2	+100.0	66.00	102.8	-3.00	-4.5	.1938	107.4
1901.	4	133.3			63.00	98.1			.1979	109.7
1902.	4	133.3			63.00	98.1			.1979	109.7
1903.	4	133.3			63.00	98.1			.1979	109.7

LABORERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	39	100.0	+17	+43.3	62.51	100.0	+0.06	+0.1	\$0.1370	100.0
1890.	33	84.6	+23	+69.7	62.91	100.6	— .34	— .5	.1364	99.6
1891.	35	89.7	+21	+60.0	62.74	100.4	— .17	— .3	.1357	99.1
1892.	35	89.7	+21	+60.0	62.74	100.4	— .17	— .3	.1357	99.1
1893.	32	82.1	+24	+73.0	63.00	100.8	— .43	— .7	.1367	99.8
1894.	32	133.3	+4	+ 7.7	61.85	98.9	+ .72	+1.2	.1394	101.8
1895.	38	97.4	+18	+47.4	62.53	100.0	+ .04	+ .1	.1368	99.9
1896.	34	87.2	+22	+64.7	62.82	100.5	— .25	— .4	.1360	99.3
1897.	30	128.2	— 6	—12.0	61.92	99.1	+ .65	+1.0	.1375	100.4
1898.	42	107.7	+14	+33.3	62.29	99.6	+ .28	+ .4	.1387	101.2
1899.	42	107.7	+14	+33.3	62.29	99.6	+ .28	+ .4	.1369	99.9
1900.	35	89.7	+21	+60.0	62.74	100.4	— .17	— .3	.1371	100.1
1901.	56	143.6			62.57	100.1			.1500	109.5
1902.	48	123.1	+8	+16.7	63.00	100.8	— .43	— .7	.1500	109.5
1903.	56	143.6			62.57	100.1			.1500	109.5

MASH HANDS, Male.

[Data from 2 establishments.]

Av. 1890-99.	6	100.0			56.08	100.0	-4.08	-7.3	\$0.2038	100.0
1890.	6	100.0			56.00	99.9	-4.00	-7.1	.1985	97.4
1891.	6	100.0			56.00	99.9	-4.00	-7.1	.1985	97.4
1892.	6	100.0			56.00	99.9	-4.00	-7.1	.1985	97.4
1893.	6	100.0			56.00	99.9	-4.00	-7.1	.2046	100.4
1894.	6	100.0			56.00	99.9	-4.00	-7.1	.2046	100.4
1895.	5	83.3	-1	-20.0	56.40	100.6	-4.40	-7.8	.2067	101.4
1896.	5	83.3	+1	+20.0	56.40	100.6	-4.40	-7.8	.2067	101.4
1897.	6	100.0			56.00	99.9	-4.00	-7.1	.2046	100.4
1898.	6	100.0			56.00	99.9	-4.00	-7.1	.2046	100.4
1899.	6	100.0			56.00	99.9	-4.00	-7.1	.2108	103.4
1900.	6	100.0			56.00	99.9	-4.00	-7.1	.2108	103.4
1901.	6	100.0			56.00	99.9	-4.00	-7.1	.2108	103.4
1902.	6	100.0			56.00	99.9	-4.00	-7.1	.2108	103.4
1903.	6	100.0			52.00	92.7			.2278	111.8

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 714.]

LIQUORS, DISTILLED—Continued.

MILLERS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.				
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.		
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.	
Av. 1890-99.	6	100.0	+1	+16.7	58.94	100.0	-0.65	-1.1	\$0.2408	100.0	+\$0.0001	+0.4	
1890	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2355	97.8	+	.0054	+2.3
1891	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2355	97.8	+	.0064	+2.7
1892	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2355	97.8	+	.0064	+2.7
1893	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2355	97.8	+	.0064	+2.7
1894	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2355	97.8	+	.0054	+2.3
1895	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2369	98.4	+	.0040	+1.7
1896	6	100.0	+1	+16.7	59.00	100.1	- .71	-1.2	.2327	96.6	+	.0082	+3.4
1897	5	83.3	+2	+40.0	58.80	99.8	- .51	- .9	.2559	106.3	-	.0150	-5.9
1898	5	83.3	+2	+40.0	58.80	99.8	- .51	- .9	.2559	106.3	-	.0150	-5.9
1899	5	83.3	+2	+40.0	58.80	99.8	- .51	- .9	.2493	103.5	-	.0084	+3.4
1900	5	83.3	+2	+40.0	58.80	99.8	- .51	- .9	.2526	104.9	-	.0117	+4.8
1901	8	133.3	-1	-12.5	59.25	100.5	- .96	-1.6	.2266	94.1	+	.0143	+5.9
1902	7	116.7			59.14	100.3	- .85	-1.4	.2352	97.7	+	.0087	+3.6
1903	7	116.7			58.29	98.9			.2409	100.0			

SPIRIT RUNNERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	4	100.0			78.00	100.0	-6.00	-7.7	\$0.2649	100.0	+\$0.0476	+17.6	
1890	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1891	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1892	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1893	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1894	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1895	4	100.0			78.00	100.0	-6.00	-7.7	.2580	97.4	+	.0545	+21.0
1896	4	100.0			78.00	100.0	-6.00	-7.7	.2753	103.9	+	.0372	+12.9
1897	4	100.0			78.00	100.0	-6.00	-7.7	.2753	103.9	+	.0372	+12.9
1898	4	100.0			78.00	100.0	-6.00	-7.7	.2753	103.9	+	.0372	+12.9
1899	4	100.0			78.00	100.0	-6.00	-7.7	.2753	103.9	+	.0372	+12.9
1900	4	100.0			78.00	100.0	-6.00	-7.7	.2753	103.9	+	.0372	+12.9
1901	4	100.0			72.00	100.0	-6.00	-7.7	.2927	110.5	+	.0150	+5.9
1902	4	100.0			72.00	92.3			.3125	118.0			
1903	4	100.0			72.00	92.3			.3125	118.0			

STILL MEN, Male.

[Data from 1 establishment.]

Av. 1890-99.	1	100.0	59.80	100.0	-5.80	-9.7	\$0.1856	100.0	+\$0.0366	+19.7
1890	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1891	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1892	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1893	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1894	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1895	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1896	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1897	1	100.0	60.00	100.3	-6.00	-10.0	.1833	98.8	+.0389	+21.0
1898	1	100.0	59.00	98.7	-5.00	-8.5	.1949	105.0	+.0273	+14.7
1899	1	100.0	59.00	98.7	-5.00	-8.5	.1949	105.0	+.0273	+14.7
1900	1	100.0	59.00	98.7	-5.00	-8.5	.1949	105.0	+.0273	+14.7
1901	1	100.0	54.00	90.3			.2130	114.8	+.0092	+4.9
1902	1	100.0	54.00	90.3			.2130	114.8	+.0092	+4.9
1903	1	100.0	54.00	90.3			.2222	119.7		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

LIQUORS, DISTILLED—Continued.

TRIMMERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	6	100.0	+2	+33.3	60.00	100.0	.....	.....	\$0.1800	100.0	+\$0.0450	+25.0
1890	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1891	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1892	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1893	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1894	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1895	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1896	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1897	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.1750	97.2	+ .0500	+28.6
1898	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.2000	111.1	+ .0250	+12.5
1899	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.2000	111.1	+ .0250	+12.5
1900	6	100.0	+2	+33.3	60.00	100.0	.....	.....	.2000	111.1	+ .0250	+12.5
1901	8	133.3	.....	.....	60.00	100.0	.....	.....	.2250	125.0	.....	.....
1902	8	133.3	.....	.....	60.00	100.0	.....	.....	.2250	125.0	.....	.....
1903	8	133.3	.....	.....	60.00	100.0	.....	.....	.2250	125.0	.....	.....

WAREHOUSEMEN, Male.

[Data from 3 establishments.]

Av. 1890-99.	17	100.0	+3	+17.6	59.96	100.0	-1.16	-1.9	\$0.1841	100.0	+\$0.0126	+6.8
1890	17	100.0	+3	+17.6	60.00	100.1	-1.20	-2.0	.1824	99.1	+ .0143	+7.8
1891	17	100.0	+3	+17.6	60.00	100.1	-1.20	-2.0	.1824	99.1	+ .0143	+7.8
1892	16	94.1	+4	+25.0	60.00	100.1	-1.20	-2.0	.1833	99.6	+ .0134	+7.3
1893	16	94.1	+4	+25.0	60.00	100.1	-1.20	-2.0	.1833	99.6	+ .0134	+7.3
1894	16	94.1	+4	+25.0	60.00	100.1	-1.20	-2.0	.1833	99.6	+ .0134	+7.3
1895	18	105.9	+2	+11.1	60.00	100.1	-1.20	-2.0	.1819	98.8	+ .0148	+8.1
1896	18	105.9	+2	+11.1	60.00	100.1	-1.20	-2.0	.1819	98.8	+ .0148	+8.1
1897	19	111.8	+1	+ 5.3	60.00	100.1	-1.20	-2.0	.1842	100.1	+ .0125	+6.8
1898	17	100.0	+3	+17.6	59.76	99.7	— .96	-1.6	.1891	102.7	+ .0076	+4.0
1899	20	117.6	.....	.....	58.80	99.7	-1.00	-1.7	.1891	102.7	+ .0076	+4.0
1900	14	82.4	+6	+42.9	59.71	99.6	— .91	-1.5	.1987	107.9	+ .0020	-1.0
1901	22	129.4	+2	+ 9.1	58.91	98.2	— .11	— .2	.1879	102.1	+ .0088	+4.7
1902	21	123.5	-1	- 4.8	58.86	98.2	— .06	— .1	.2048	111.2	+ .0081	-4.0
1903	20	117.6	.....	.....	58.80	98.1	.....	.....	.1967	106.8	.....	.....

YEAST MAKERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	2	100.0	.....	.....	66.00	100.0	.....	.....	\$0.6225	100.0	-\$0.0357	- 5.7
1890	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1891	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1892	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1893	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1894	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1895	2	100.0	.....	.....	66.00	100.0	.....	.....	.6182	99.3	- .0314	- 5.1
1896	2	100.0	.....	.....	66.00	100.0	.....	.....	.6529	104.9	+ .0661	+10.1
1897	2	100.0	.....	.....	66.00	100.0	.....	.....	.6529	104.9	+ .0661	+10.1
1898	2	100.0	.....	.....	66.00	100.0	.....	.....	.6529	104.9	+ .0661	+10.1
1899	2	100.0	.....	.....	66.00	100.0	.....	.....	.6570	89.5	+ .0298	+ 5.4
1900	2	100.0	.....	.....	66.00	100.0	.....	.....	.4612	74.1	+ .1256	+27.2
1901	2	100.0	.....	.....	66.00	100.0	.....	.....	.5868	94.3	.....	.....
1902	2	100.0	.....	.....	66.00	100.0	.....	.....	.5868	94.3	.....	.....
1903	2	100.0	.....	.....	66.00	100.0	.....	.....	.5868	94.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

LIQUORS, DISTILLED—Concluded.

YEAST MEN, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	2	100.0			60.00	100.0			\$0.2850	100.0	-\$0.0092	-3.2
1890	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1891	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1892	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1893	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1894	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1895	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1896	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1897	2	100.0			60.00	100.0			.2750	96.2		
1898	2	100.0			60.00	100.0			.2917	102.0	-.0167	-5.9
1899	2	100.0			60.00	100.0			.2500	87.4	+.0250	+2.9
1900	3	150.0	-11	-23.3	60.00	100.0			.2500	87.4	+.0250	+2.9
1901	3	150.0	-1	-33.3	60.00	100.0			.2500	87.4	+.0250	+2.9
1902	2	100.0			60.00	100.0			.2750	96.2		
1903	2	100.0			60.00	100.0			.2750	96.2		

LIQUORS, MALT.

BOTTLERS, Male.

[Data from 23 establishments.]

Av. 1890-99.	596	100.0	+856	+143.6	59.61	100.0	-5.03	-8.4	\$0.1545	100.0	-\$0.0422	-27.3
1890	566	95.0	+886	+136.5	59.70	100.1	-5.09	-8.5	.1519	98.3	-.0448	-29.5
1891	539	90.4	-913	-169.4	59.69	100.1	-5.08	-8.5	.1587	102.7	-.0380	-24.6
1892	572	96.0	+880	+133.8	59.71	100.1	-5.10	-8.5	.1537	99.5	-.0430	-28.0
1893	595	99.8	+857	+144.0	59.72	100.1	-5.11	-8.6	.1517	98.2	-.0450	-29.2
1894	600	100.7	+852	+142.0	59.72	100.1	-5.11	-8.6	.1554	100.6	-.0413	-26.7
1895	520	87.2	-932	-159.2	59.68	99.1	-5.07	-8.5	.1570	101.6	-.0387	-25.0
1896	539	90.5	+883	+142.4	59.72	100.1	-5.11	-8.6	.1535	99.4	-.0432	-28.0
1897	615	103.2	+827	+136.1	59.66	100.0	-5.05	-8.5	.1542	99.8	-.0425	-27.5
1898	628	105.4	+824	+134.2	59.69	99.1	-5.10	-8.6	.1543	99.9	-.0424	-27.5
1899	725	121.6	-727	-160.3	59.71	100.1	-5.10	-8.5	.1544	99.9	-.0423	-27.5
1900	1,911	321.1	-462	-24.1	55.35	92.8	-5.74	-9.7	.1789	115.8	-.0178	-11.5
1901	1,119	187.8	+333	+29.8	55.58	93.2	-5.97	-10.3	.1922	124.4	-.0445	-29.0
1902	1,215	203.6	-209	-16.8	54.35	91.2	-5.24	-8.4	.1967	127.3		
1903	1,452	243.6			51.61	86.6						

CELLAR MEN, Male.

[Data from 47 establishments.]

Av. 1890-99.	672	100.0	+622	+92.2	58.75	100.0	-5.77	-9.8	\$0.2661	100.0	-\$0.0478	-17.9
1890	673	97.2	+811	+121.4	59.11	100.6	-6.15	-10.1	.2668	98.5	-.0546	-20.5
1891	649	96.6	+835	+131.1	58.95	100.5	-5.97	-10.1	.2645	97.9	-.0569	-21.0
1892	679	101.0	+835	+121.1	58.95	100.1	-5.99	-10.2	.2613	98.2	-.0591	-22.2
1893	679	101.0	+835	+121.1	58.88	100.2	-5.98	-10.0	.2632	99.7	-.0462	-17.5
1894	640	95.2	+744	+111.2	58.88	100.2	-5.98	-10.0	.2669	100.3	-.0445	-16.7
1895	646	96.2	+734	+111.0	58.88	100.2	-5.98	-10.0	.2676	100.5	-.0441	-16.5
1896	646	96.1	+684	+102.2	58.87	100.1	-5.88	-9.9	.2693	101.3	-.0418	-15.5
1897	670	101.2	+644	+94.9	58.62	99.8	-5.64	-9.6	.2695	101.3	-.0419	-15.5
1898	688	102.1	+484	+76.0	58.28	99.2	-5.56	-9.1	.2711	101.9	-.0403	-14.8
1899	682	101.5	+462	+76.6	58.10	98.9	-5.12	-8.8	.2725	102.4	-.0389	-14.0
1900	707	105.2	+27	+3.8	57.24	97.1	-4.26	-7.4	.2781	104.7	-.0329	-12.3
1901	700	104.2	+34	+4.9	56.06	95.1	-3.08	-5.5	.2863	107.6	-.0251	-9.0
1902	715	106.1	-15	-2.7	54.27	92.1	-1.29	-2.4	.3021	113.6	-.0090	-3.4
1903	710	105.2			53.98	91.2			.3114	117.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LIQUORS, MALT—Continued.

COOPERS, Male.

[Data from 32 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	303	100.0	+ 20	+ 6.6	58.65	100.0	-8.38	-14.3	\$0.2411	100.0	+\$0.0647	+26.8
1890	211	69.6	+112	+38.1	59.29	101.1	-9.02	-15.2	.2387	99.0	+.0671	+28.1
1891	214	70.6	+109	+36.9	58.99	100.6	-8.72	-14.8	.2416	100.2	+.0642	+26.6
1892	230	75.9	+93	+30.4	59.22	101.0	-8.95	-15.1	.2378	98.6	+.0680	+28.6
1893	331	110.2	-11	-3.3	59.53	101.5	-9.26	-15.6	.2366	98.1	+.0692	+29.2
1894	348	114.9	-25	-7.2	59.62	101.5	-9.25	-15.6	.2397	99.4	+.0661	+27.6
1895	354	116.8	-31	-8.8	59.44	101.3	-9.17	-15.4	.2416	100.2	+.0642	+26.6
1896	328	108.3	-6	-1.6	57.01	97.2	-6.74	-11.8	.2414	100.1	+.0644	+26.7
1897	361	119.1	-38	-10.5	59.32	101.1	-9.05	-15.3	.2405	99.8	+.0653	+27.2
1898	313	103.3	+10	+3.2	57.21	97.5	-6.72	-11.8	.2477	102.7	+.0581	+23.5
1899	336	110.9	-13	-3.9	57.60	98.2	-6.94	-12.1	.2450	101.6	+.0608	+24.8
1900	287	94.7	+36	+12.5	53.87	91.8	-7.33	-12.7	.2589	107.4	+.0162	+18.1
1901	309	102.0	+14	+4.5	53.87	91.8	-7.33	-12.7	.2774	115.1	+.0284	+10.2
1902	312	103.0	+11	+3.8	50.37	85.9	-1.10	-1.9	.3031	125.7	+.0077	+
1903	323	106.6			50.27	85.7			.3058	126.8		

DRIVERS, Male.

[Data from 46 establishments.]

Av. 1890-99.	800	100.0	+139	+17.4	61.10	100.0	-1.88	-3.1	\$0.2579	100.0	+\$0.0194	+7.6
1890	715	89.4	+224	+28.0	61.29	100.3	-2.07	-3.4	.2554	99.0	+.0219	+8.6
1891	749	93.6	+190	+23.4	61.17	100.1	-1.95	-3.2	.2577	99.9	+.0196	+7.6
1892	759	94.9	+180	+22.7	61.16	100.1	-1.94	-3.1	.2562	99.8	+.0211	+8.2
1893	793	99.1	+146	+18.4	61.12	100.0	-1.90	-3.1	.2579	100.0	+.0194	+7.5
1894	771	96.4	+168	+21.8	61.11	100.0	-1.89	-3.1	.2588	100.3	+.0185	+7.1
1895	815	101.9	+124	+15.2	61.16	100.1	-1.94	-3.2	.2583	100.2	+.0190	+7.4
1896	840	105.0	+99	+11.8	61.17	100.1	-1.95	-3.2	.2584	100.2	+.0189	+7.3
1897	857	107.1	+82	+9.6	60.93	99.8	-1.73	-2.8	.2588	100.3	+.0185	+7.1
1898	840	105.0	+99	+11.8	60.93	99.7	-1.71	-2.8	.2583	100.2	+.0190	+7.4
1899	864	108.0	+75	+8.7	60.90	99.7	-1.68	-2.8	.2592	100.5	+.0181	+7.0
1900	868	108.5	+71	+8.2	60.63	99.2	-1.41	-2.3	.2638	102.3	+.0135	+5.1
1901	899	112.4	+40	+4.4	59.95	98.1	-.73	-1.2	.2689	104.3	+.0081	+3.1
1902	909	113.6	+30	+3.3	59.39	97.2	-.17	-.3	.2759	107.0	+.0013	+
1903	939	117.4			59.22	96.9			.2773	107.5		

FERMENTERS, Male.

[Data from 32 establishments.]

Av. 1890-99.	157	100.0	+27	+17.2	59.73	100.0	-6.71	-11.2	\$0.2620	100.0	-\$0.0615	+19.7
1890	136	86.6	+48	+35.3	61.03	102.2	-8.01	-13.1	.2566	97.9	+.0569	+22.2
1891	149	94.9	+35	+23.5	60.00	100.5	-6.98	-11.6	.2522	96.3	+.0613	+24.3
1892	145	92.4	+39	+26.9	60.00	100.5	-6.98	-11.6	.2572	98.2	+.0563	+21.9
1893	165	105.1	+19	+11.5	59.89	100.2	-6.83	-11.4	.2597	99.1	+.0538	+20.7
1894	169	107.6	+15	+8.9	59.89	100.3	-6.87	-11.5	.2604	99.4	+.0531	+20.4
1895	168	107.0	+16	+9.5	59.68	99.9	-6.66	-11.2	.2629	100.3	+.0506	+19.2
1896	158	100.6	+26	+16.5	59.70	99.9	-6.68	-11.2	.2633	100.5	+.0502	+19.1
1897	160	101.9	+24	+15.0	59.36	99.4	-6.84	-10.7	.2636	101.4	+.0479	+18.0
1898	159	101.3	+25	+15.7	58.87	98.6	-6.85	-9.9	.2709	103.4	+.0427	+15.8
1899	163	103.8	+21	+12.9	58.88	98.6	-5.86	-10.0	.2798	106.8	+.0357	+12.0
1900	170	108.3	+14	+8.2	57.48	96.2	-4.46	-7.8	.2890	110.3	+.0245	+8.5
1901	166	105.7	+18	+10.8	55.90	93.6	-2.88	-5.2	.2943	116.2	+.0090	+3.0
1902	173	110.2	+11	+6.4	55.88	90.2	-.86	-1.6	.3125	119.7		
1903	184	117.2			55.02	88.8						

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

LIQUORS, MALT—Concluded.

KETTLE MEN, Male.

[Data from 43 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	174	100.0	+26	+14.9	59.52	100.0	-6.61	-11.1	\$0.2681	100.0	+\$0.0516	+12.5
1890	168	96.6	+32	+19.0	60.24	101.2	-7.33	-12.2	.2574	96.0	+.0323	+24.5
1891	168	96.6	+32	+19.0	59.83	100.5	-6.92	-11.6	.2617	97.6	+.0589	+22.5
1892	175	100.6	+25	+14.3	59.81	100.5	-6.90	-11.5	.2621	97.8	+.0571	+22.6
1893	175	100.6	+25	+14.3	59.67	100.3	-6.76	-11.3	.2626	97.9	+.0571	+22.7
1894	180	103.4	+20	+11.1	59.74	100.4	-6.83	-11.4	.2651	98.9	+.0546	+20.6
1895	177	101.7	+23	+13.0	59.57	100.1	-6.66	-11.2	.2693	100.4	+.0504	+18.7
1896	173	99.4	+27	+15.6	59.53	100.0	-6.62	-11.1	.2707	101.0	+.0490	+18.1
1897	173	99.4	+27	+15.6	59.12	99.3	-6.21	-10.5	.2750	102.6	+.0447	+16.3
1898	179	102.9	+21	+11.7	58.85	98.9	-5.94	-10.1	.2783	103.8	+.0414	+14.9
1899	175	100.6	+25	+14.3	58.86	98.9	-5.95	-10.1	.2784	103.8	+.0413	+14.8
1900	184	105.7	+16	+8.7	58.13	97.7	-5.22	-9.0	.2818	105.1	+.0379	+13.4
1901	182	104.6	+18	+9.9	56.95	95.7	-4.04	-7.1	.2911	108.6	+.0286	+9.5
1902	189	108.6	+11	+5.8	54.02	90.8	-1.11	-2.1	.3095	115.4	+.0102	+3.3
1903	200	114.9	.....	.....	52.91	88.9	.....	.....	.3197	119.2	.....	.....

MALT HOUSE MEN, Male.

[Data from 21 establishments.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	303	100.0	-13	-4.3	60.09	100.0	-6.88	-11.4	\$0.2513
1890	327	107.9	-37	-11.3	60.07	100.0	-6.86	-11.4	.2462
1891	300	99.0	-10	-3.3	60.02	99.9	-6.81	-11.3	.2500
1892	289	95.4	+1	+3.3	60.70	101.0	-7.49	-12.3	.2427
1893	295	97.4	-5	-1.7	60.51	100.7	-7.33	-12.1	.2441
1894	325	107.3	-35	-10.8	60.59	100.8	-7.38	-12.2	.2468
1895	302	99.7	-12	-4.0	60.62	100.9	-7.41	-12.2	.2481
1896	310	102.3	-20	-6.5	60.56	100.8	-7.35	-12.1	.2515
1897	286	94.7	-6	-2.0	60.00	99.9	-6.79	-11.3	.2557
1898	285	94.1	+5	+1.8	59.01	98.2	-5.90	-9.8	.2605
1899	300	99.0	-10	-3.3	58.82	97.9	-5.61	-9.5	.2631
1900	314	103.6	-24	-7.6	55.82	92.9	-2.61	-4.7	.2799
1901	318	105.0	-28	-8.5	55.18	91.8	-1.97	-3.6	.2873
1902	279	92.1	+11	+3.9	54.21	90.2	-1.00	-1.8	.2953
1903	290	95.7	.....	.....	53.21	88.6	.....	.....	.3034

WASHERS, Male.

[Data from 16 establishments.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	635	100.0	+27	+4.3	59.00	100.0	-6.75	-11.4	\$0.2303
1890	635	100.0	+27	+4.3	59.27	100.5	-7.02	-11.8	.2223
1891	645	101.6	+17	+2.6	59.20	100.3	-6.95	-11.7	.2224
1892	656	103.3	+6	+0.9	59.31	100.5	-7.06	-11.9	.2259
1893	715	112.6	-53	-7.4	59.39	100.7	-7.14	-12.0	.2268
1894	684	107.7	-29	-3.2	59.33	100.6	-7.08	-11.9	.2272
1895	655	103.1	+7	+1.1	59.20	100.3	-6.95	-11.7	.2299
1896	598	94.2	+64	+10.7	59.09	100.2	-6.84	-11.6	.2329
1897	584	92.0	+78	+13.1	58.90	99.8	-6.65	-11.3	.2355
1898	601	94.6	+61	+10.1	58.26	98.7	-6.01	-10.3	.2398
1899	575	90.6	+87	+15.1	58.05	98.4	-5.90	-10.0	.2418
1900	558	87.9	-104	-18.6	56.98	96.6	-4.73	-8.3	.2486
1901	646	101.7	+16	+2.5	55.30	93.7	-3.05	-5.5	.2606
1902	651	102.5	+11	+1.7	53.25	90.3	-1.00	-1.9	.2776
1903	662	104.3	.....	.....	52.25	88.6	.....	.....	.2864

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LITHOGRAPHING.

ENGRAVERS, Male.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	26	100.0	+ 6	+23.1	48.00	100.0	.....	.....	\$0.4084	100.0	+\$0.0278	+ 6.8
1890	27	103.8	+ 5	+18.5	48.00	100.0	.....	.....	.3958	96.9	+ .0404	+10.2
1891	27	103.8	+ 5	+18.5	48.00	100.0	.....	.....	.4144	101.5	+ .0218	+ 5.3
1892	31	119.2	+ 1	+ 3.2	48.00	100.0	.....	.....	.3905	95.6	+ .0457	+11.7
1893	28	107.7	+ 4	+14.3	48.00	100.0	.....	.....	.3996	97.8	+ .0366	+ 9.2
1894	27	103.8	+ 5	+18.5	48.00	100.0	.....	.....	.3912	95.8	+ .0450	+11.5
1895	26	100.0	+ 6	+23.1	48.00	100.0	.....	.....	.3942	96.5	+ .0420	+10.7
1896	22	84.6	+10	+45.5	48.00	100.0	.....	.....	.3992	97.7	+ .0370	+ 9.3
1897	25	96.2	+ 7	+28.0	48.00	100.0	.....	.....	.4182	102.4	+ .0180	+ 4.3
1898	23	88.5	+ 9	+39.1	48.00	100.0	.....	.....	.4357	106.7	+ .0005	+ .1
1899	26	100.0	+ 6	+23.1	48.00	100.0	.....	.....	.4447	108.9	+ .0085	+ 1.9
1900	27	103.8	+ 5	+18.5	48.00	100.0	.....	.....	.4421	108.3	+ .0059	+ 1.3
1901	29	111.5	+ 3	+10.3	48.00	100.0	.....	.....	.4389	107.5	+ .0027	+ .6
1902	32	123.1	.....	.....	48.00	100.0	.....	.....	.4476	109.6	+ .0114	+ 2.5
1903	32	123.1	.....	.....	48.00	100.0	.....	.....	.4362	106.8	.....	.....

PRESSMEN, Male.

[Data from 5 establishments.]

Av. 1890-99.	22	100.0	+3	+13.6	54.57	100.0	-0.45	-0.8	\$0.3548	100.0	+\$0.0130	+3.7
1890	22	100.0	+3	+13.6	54.55	100.0	- .43	- .8	.3517	99.1	+ .0161	+4.6
1891	20	90.9	+5	+25.0	54.65	100.1	- .53	-1.0	.3599	101.4	+ .0079	+2.2
1892	22	100.0	+3	+13.6	54.59	100.0	- .47	- .9	.3474	97.9	+ .0204	+5.9
1893	21	95.5	+4	+19.0	54.62	100.1	- .50	- .9	.3577	100.8	+ .0101	+2.8
1894	23	104.5	+2	+ 8.7	54.52	99.9	- .40	- .7	.3567	100.5	+ .0111	+3.1
1895	21	95.5	+4	+19.0	54.62	100.1	- .50	- .9	.3428	96.6	+ .0250	+7.3
1896	21	95.5	+4	+19.0	54.62	100.1	- .50	- .9	.3463	97.6	+ .0215	+6.2
1897	22	100.0	+3	+13.6	54.55	100.0	- .43	- .8	.3583	101.0	+ .0096	+2.7
1898	23	104.5	+2	+ 8.7	54.52	99.9	- .40	- .7	.3616	101.9	+ .0062	+1.7
1899	25	113.6	.....	.....	54.48	99.8	- .36	- .7	.3660	103.2	+ .0019	+ .5
1900	26	118.2	-1	- 3.8	54.69	100.2	- .57	-1.0	.3665	103.3	+ .0013	+ .4
1901	27	122.7	-2	- 7.4	54.63	100.1	- .51	- .9	.3654	103.0	+ .0024	+ .7
1902	25	113.6	.....	.....	54.12	99.2	.....	.....	.3589	101.2	+ .0089	+2.5
1903	25	113.6	.....	.....	54.12	99.2	.....	.....	.3678	103.7	.....	.....

TRANSFERREES, Male.

[Data from 5 establishments.]

Av. 1890-99.	34	100.0	+13	+38.2	56.38	100.0	-1.49	-2.6	\$0.2983	100.0	+\$0.0342	+11.5
1890	31	91.2	+16	+51.6	56.10	99.5	-1.21	-2.2	.2895	97.0	+ .0430	+14.9
1891	32	94.1	+15	+46.9	56.19	99.7	-1.30	-2.3	.2946	98.8	+ .0379	+12.9
1892	31	91.2	+16	+51.6	55.94	99.2	-1.06	-1.9	.3024	101.4	+ .0301	+10.0
1893	33	97.1	+14	+42.4	56.12	99.5	-1.23	-2.2	.2984	100.0	+ .0341	+11.4
1894	28	82.4	+19	+67.9	56.36	100.0	-1.47	-2.6	.2936	98.4	+ .0389	+13.3
1895	32	94.1	+15	+46.9	56.50	100.2	-1.61	-2.8	.3087	103.5	+ .0238	+ 7.7
1896	32	94.1	+15	+46.9	56.84	100.8	-1.95	-3.4	.2974	99.7	+ .0351	+11.8
1897	38	111.8	+ 9	+23.7	56.50	100.2	-1.61	-2.8	.2967	99.5	+ .0358	+12.1
1898	38	111.8	+ 9	+23.7	56.68	100.5	-1.79	-3.2	.2991	100.3	+ .0334	+11.2
1899	42	123.5	+ 5	+11.9	56.52	100.2	-1.63	-2.9	.3029	101.5	+ .0296	+ 9.8
1900	43	126.5	+ 4	+ 9.3	56.44	100.1	-1.55	-2.7	.3010	100.9	+ .0315	+10.5
1901	46	135.3	+ 1	+ 2.2	56.50	100.2	-1.61	-2.8	.3107	104.2	+ .0218	+ 7.0
1902	44	129.4	+ 3	+ 6.8	55.91	99.2	-1.02	-1.8	.3170	106.3	+ .0155	+ 4.9
1903	47	138.2	.....	.....	54.89	97.4	.....	.....	.3325	111.5	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 716.]

LUMBER.

BAND SETTERS, Male.

[Data from 22 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	57	100.0	-2	+3.5	62.06	100.0	-0.33	-0.5	\$0.2327	100.0	-\$0.0360	-15
1890	57	100.0	-2	+3.5	62.21	100.2	-0.48	-8	.2386	102.5	-.0361	-15
1891	57	100.0	-2	+3.5	62.11	100.1	-0.38	-6	.2392	102.8	-.0295	-12
1892	57	101.8	+1	+1.7	62.17	100.2	-0.41	-7	.2413	103.7	-.0274	-11
1893	58	98.2	+3	+5.4	62.14	100.1	-0.44	-7	.2360	101.4	-.0472	-20
1894	55	96.5	+4	+7.3	62.07	100.0	-0.34	-5	.2228	96.2	-.0442	-19
1895	58	101.8	-1	+1.7	62.07	100.0	-0.31	-5	.2363	94.7	-.0484	-21
1896	55	96.5	+4	+7.3	61.85	99.7	-0.12	-2	.2249	96.6	-.0458	-19
1897	56	98.2	+3	+5.4	61.82	99.6	-0.08	-1	.2291	98.5	-.0386	-16
1898	59	103.5	-	-	62.03	100.0	-0.30	-5	.2321	99.7	-.0399	-17
1899	60	105.3	-1	-1.7	62.10	100.1	-0.37	-6	.2417	103.9	-.0276	-11
1900	59	103.5	-	-	62.03	100.0	-0.30	-5	.2431	104.5	-.0276	-11
1901	57	100.0	-2	-3.5	61.05	98.4	+0.68	+1.1	.2432	104.5	-.0276	-11
1902	65	114.0	-6	-9.2	61.48	99.1	+0.25	+4	.2650	113.9	-.0667	-28
1903	59	103.5	-	-	61.73	99.7	-	-	.2987	115.5	-	-

CANT SETTERS, GANG, Male.

[Data from 10 establishments.]

Av. 1890-99.	31	100.0	-4	-12.9	63.56	100.0	-2.67	-4.2	\$0.1825	100.0	+\$0.0239	+13
1890	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1849	101.3	-.0215	-11
1891	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1850	101.4	-.0214	-11
1892	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1854	101.6	-.0210	-11
1893	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1852	101.5	-.0212	-11
1894	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1851	101.4	-.0213	-11
1895	31	100.0	-4	-12.9	63.68	100.2	-2.79	-4.4	.1817	99.6	-.0247	-13
1896	32	103.2	-5	-15.6	63.56	100.0	-2.67	-4.2	.1741	95.4	-.0325	-17
1897	32	103.2	-5	-15.6	63.56	100.0	-2.67	-4.2	.1741	95.4	-.0325	-17
1898	28	90.3	-1	-3.6	63.21	99.4	-2.32	-3.7	.1810	99.2	-.0254	-13
1899	28	90.3	-1	-3.6	63.21	99.4	-2.32	-3.7	.1887	103.4	-.0177	-8
1900	28	90.3	-1	-3.6	63.21	99.4	-2.32	-3.7	.1903	104.3	-.0161	-7
1901	28	90.3	-1	-3.6	63.21	99.4	-2.32	-3.7	.1911	104.7	-.0153	-7
1902	28	90.3	-1	-3.6	62.14	97.8	-1.25	-2.0	.1947	106.7	-.0117	-5
1903	27	87.1	-	-	60.99	95.8	-	-	.2004	113.1	-	-

CARRIAGE MEN, Male.

[Data from 7 establishments.]

Av. 1890-99.	24	100.0	.....	64.87	100.0	-1.74	-2.7	\$0.1389	100.0	+\$0.0317	+23	
1890	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1368	98.5	-.0348	-25	
1891	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1381	99.4	-.0325	-23	
1892	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1381	99.4	-.0325	-23	
1893	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1381	99.4	-.0325	-23	
1894	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1382	99.5	-.0324	-23	
1895	22	91.7	-2	-9.1	64.77	99.8	-1.64	-2.5	.1352	97.3	-.0354	-26
1896	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1372	98.8	-.0324	-23	
1897	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1377	99.1	-.0322	-23	
1898	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1385	100.4	-.0311	-22	
1899	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1408	107.8	-.0266	-19	
1900	24	100.0	.....	64.88	100.0	-1.75	-2.7	.1488	107.1	-.0218	-14	
1901	24	100.0	.....	63.88	98.5	-1.7	-1.2	.1560	112.3	-.0146	-9	
1902	24	100.0	.....	63.13	97.3	-1.7	-1.2	.1637	117.9	-.0069	-4	
1903	24	100.0	.....	63.13	97.3	-1.7	-1.2	.1706	122.8	-	-	

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LUMBER—Continued.

CHOPPERS AND SAWYERS IN WOODS, Male.

[Data from 16 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	1,181	100.0	+416	+35.2	61.51	100.0	-0.14	-0.2	\$0.1751	100.0	+\$0.0286	+16.3
1890.	1,160	98.2	+437	+37.7	61.78	100.4	- .41	- .7	.1727	98.6	+ .0310	+18.0
1891.	1,188	100.6	+409	+34.4	61.74	100.4	- .37	- .6	.1713	97.8	- .0324	+18.9
1892.	1,190	100.8	+407	+34.2	61.54	100.0	- .17	- .3	.1739	99.3	- .0298	+17.1
1893.	1,122	95.0	+475	+42.3	61.44	99.9	- .07	- .1	.1680	95.9	- .0357	+21.3
1894.	1,132	95.9	+465	+41.1	61.43	99.9	- .06	- .1	.1659	94.7	- .0378	+22.8
1895.	1,146	97.0	+451	+39.4	61.37	99.8			.1724	98.5	- .0313	+18.2
1896.	1,152	97.5	+445	+38.6	61.48	100.0	- .11	- .2	.1722	98.3	- .0315	+18.3
1897.	1,218	103.1	+379	+31.1	61.37	99.8			.1768	101.0	- .0269	+15.2
1898.	1,220	103.3	+377	+30.9	61.29	99.6	+ .08	+ .1	.1865	106.5	- .0172	+ 9.2
1899.	1,277	108.1	+320	+25.1	61.64	100.2	- .27	- .4	.1916	109.4	- .0121	+ 6.3
1900.	1,356	114.8	+241	+17.8	61.54	100.0	- .17	- .3	.1918	109.5	- .0119	+ 6.2
1901.	1,359	115.1	+238	+17.5	61.42	99.9	- .06	- .1	.1982	113.7	- .0055	+ 2.8
1902.	1,434	121.4	+163	+11.4	61.53	100.0	- .16	- .3	.2026	115.2	- .0011	+ .5
1903.	1,697	135.2			61.37	99.8			.2037	116.3		

CIRCULAR SETTERS, Male.

[Data from 15 establishments.]

Av. 1890-99.	28	100.0	+13	+46.4	62.23	100.0	-1.23	-2.0	\$0.1815	100.0	+\$0.0121	+ 6.7
1890.	25	89.3	+16	+64.0	62.84	101.0	-1.84	-2.9	.1918	105.7	+ .0018	+ .9
1891.	26	92.9	+15	+57.7	62.50	100.4	-1.50	-2.4	.1865	102.8	+ .0071	+ 3.8
1892.	26	92.9	+15	+57.7	62.50	100.4	-1.50	-2.4	.1874	103.3	+ .0062	+ 3.3
1893.	26	92.9	+15	+57.7	61.35	98.6	- .35	- .6	.1860	102.5	+ .0076	+ 4.1
1894.	26	92.9	+15	+57.7	61.35	98.6	- .35	- .6	.1792	98.7	+ .0144	+ 8.0
1895.	26	92.9	+15	+57.7	62.50	100.4	-1.50	-2.4	.1775	97.8	+ .0161	+ 9.1
1896.	27	96.4	+14	+51.9	62.63	100.6	-1.63	-2.6	.1774	97.7	- .0162	+ 9.1
1897.	30	107.1	+11	+36.7	62.37	100.2	-1.37	-2.2	.1739	95.8	- .0197	+11.3
1898.	32	114.3	+ 9	+28.1	62.22	100.0	-1.22	-2.0	.1793	98.2	- .0153	+ 8.6
1899.	35	125.0	+ 6	+17.1	62.03	99.7	-1.03	-1.7	.1769	97.5	- .0167	+ 9.4
1900.	35	125.0	+ 6	+17.1	61.51	98.8	- .51	- .8	.1832	100.9	- .0104	+ 5.7
1901.	37	132.1	+ 4	+10.8	61.43	98.7	- .13	- .7	.1842	101.5	+ .0094	+ 5.1
1902.	41	146.4			61.00	98.0			.1840	101.4	+ .0096	+ 5.2
1903.	41	146.4			61.00	98.0			.1936	106.7		

EDGER MEN, Male.

[Data from 23 establishments.]

Av. 1890-99.	52	100.0	+17	+32.7	61.90	100.0	-0.80	-1.3	\$0.2314	100.0	+\$0.0237	+10.2
1890.	49	94.2	+20	+40.8	62.39	100.8	-1.39	-2.1	.2424	104.8	+ .0127	+ 5.2
1891.	50	96.2	+19	+38.0	62.10	100.3	-1.00	-1.6	.2427	104.9	+ .0124	+ 5.1
1892.	50	96.2	+19	+38.0	62.10	100.3	-1.00	-1.6	.2454	106.1	+ .0097	+ 4.0
1893.	52	100.0	+17	+32.7	61.44	99.3	- .34	- .6	.2416	104.4	+ .0135	+ 5.6
1894.	48	92.3	+21	+43.8	61.44	99.3	- .34	- .6	.2261	97.7	+ .0176	+12.8
1895.	49	94.2	+20	+40.8	62.14	100.4	-1.04	-1.7	.2190	94.6	+ .0361	+16.5
1896.	51	98.1	+18	+35.3	62.06	100.3	- .96	-1.5	.2258	97.0	+ .0293	+13.0
1897.	55	105.8	+14	+25.5	61.91	100.0	- .81	-1.3	.2210	93.5	+ .0341	+15.4
1898.	56	107.7	+13	+23.2	61.77	99.8	- .67	-1.1	.2227	96.3	+ .0321	+14.5
1899.	55	111.5	+11	+19.0	61.60	99.5	- .50	- .8	.2275	98.2	- .0276	+12.1
1900.	62	119.2	+ 7	+11.3	61.40	99.2	- .30	- .5	.2381	102.9	- .0170	+ 7.1
1901.	65	125.0	+ 4	+ 6.2	61.20	98.9	- .10	- .2	.2449	105.8	- .0102	+ 4.2
1902.	67	128.8	+ 2	+ 3.0	60.90	98.4	+ .20	+ .3	.2451	105.9	+ .0100	+ 4.1
1903.	69	132.7			61.10	98.7			.2551	110.2		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1900=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

LUMBER—Continued.

FILERS, Male.

[Data from 36 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	73	100.0	+18	+24.7	62.13	100.0	-1.02	-1.6	\$0.3910	100.0	-\$0.0001	-
1890.	70	95.9	+21	+30.0	62.43	100.5	-1.32	-2.1	.3932	100.6	+.0079	+
1891.	71	97.3	+20	+28.2	62.23	100.2	-1.12	-1.8	.3958	101.2	+.0453	+
1892.	72	98.6	+19	+26.1	62.19	100.1	-1.08	-1.7	.3913	100.1	+.0499	+
1893.	71	97.3	+20	+28.2	61.80	99.5	-.69	-1.1	.3988	102.0	+.0423	+
1894.	72	98.6	+19	+26.4	61.78	99.4	-.67	-1.1	.3818	97.6	+.0583	+
1895.	70	95.9	+21	+30.0	62.26	100.2	-1.15	-1.8	.3768	96.4	+.0643	+
1896.	69	94.5	+22	+31.9	62.29	100.3	-1.18	-1.9	.3866	98.9	+.0545	+
1897.	75	102.7	+16	+21.3	62.19	100.1	-1.08	-1.7	.3862	98.8	+.0649	+
1898.	78	106.8	+13	+16.7	62.10	100.0	-.99	-1.6	.3925	100.4	+.0496	+
1899.	77	105.5	+14	+18.2	62.05	99.9	-.94	-1.5	.4069	104.1	+.0342	+
1900.	77	105.5	+14	+18.2	61.97	99.7	-.86	-1.4	.4184	107.0	+.0227	+
1901.	83	113.7	+8	+9.6	61.80	99.5	-.69	-1.1	.4232	108.2	+.0179	+
1902.	91	124.7			61.37	98.8	-.26	-.4	.4229	108.2	+.0182	+
1903.	91	124.7			61.11	98.4			.4411	112.8		

LABORERS, Male.

[Data from 17 establishments.]

Av. 1890-99.	1,204	100.0	+490	+40.7	63.55	100.0	-2.03	-3.2	\$0.1277	100.0	+\$0.0167	+
1890.	1,123	93.3	+571	+50.8	63.74	100.3	-2.22	-3.5	.1338	104.8	+.0106	+
1891.	1,186	98.5	+508	+42.8	63.64	100.1	-2.12	-3.3	.1333	104.4	+.0111	+
1892.	1,143	94.9	+551	+48.2	63.76	100.3	-2.24	-3.5	.1319	103.3	+.0125	+
1893.	1,150	95.5	+544	+47.3	63.63	100.1	-2.11	-3.3	.1313	102.8	+.0131	+
1894.	1,220	101.3	+474	+38.9	63.68	100.2	-2.16	-3.4	.1253	98.1	+.0191	+
1895.	1,216	101.0	+478	+39.3	63.57	100.0	-2.05	-3.2	.1221	95.6	+.0223	+
1896.	1,171	97.3	+523	+44.7	63.62	100.1	-2.10	-3.3	.1235	96.7	+.0209	+
1897.	1,212	100.7	+482	+39.8	63.52	100.0	-2.00	-3.2	.1211	94.8	+.0233	+
1898.	1,305	108.4	+389	+29.8	63.16	99.4	-1.64	-2.6	.1250	97.9	+.0194	+
1899.	1,314	109.1	+380	+28.9	63.22	99.5	-1.70	-2.7	.1292	101.2	+.0152	+
1900.	1,416	120.1	+248	+17.2	62.95	99.1	-1.43	-2.3	.1306	102.3	+.0138	+
1901.	1,560	129.6	+134	+8.6	62.81	98.8	-1.29	-2.1	.1351	105.8	+.0083	+
1902.	1,646	136.7	+48	+2.9	61.99	97.5	-.47	-.8	.1413	110.6	+.0031	+
1903.	1,691	140.7			61.52	96.8			.1444	113.1		

SAWYERS, BAND, Male.

[Data from 21 establishments.]

Av. 1890-99.	52	100.0	+15	+28.8	61.72	100.0	-0.82	-1.3	\$0.3975	100.0	+\$0.0876	+
1890.	51	98.1	+16	+31.4	61.88	100.3	-.98	-1.6	.4013	101.0	+.0838	+
1891.	50	96.2	+17	+34.0	61.68	99.9	-.78	-1.3	.4050	101.9	+.0801	+
1892.	50	96.2	+17	+34.0	61.80	100.1	-.90	-1.5	.4033	101.5	+.0818	+
1893.	49	94.2	+18	+36.7	61.81	100.2	-.94	-1.5	.4074	102.5	+.0777	+
1894.	41	98.1	+16	+31.4	61.76	100.1	-.86	-1.4	.3887	97.8	+.0964	+
1895.	53	101.9	+14	+26.4	61.70	100.0	-.80	-1.3	.3887	99.8	+.0964	+
1896.	51	98.1	+16	+31.4	61.65	99.9	-.75	-1.2	.3919	98.6	+.0932	+
1897.	51	98.1	+16	+31.4	61.65	99.9	-.75	-1.2	.3957	99.5	+.0894	+
1898.	57	109.6	+10	+17.5	61.58	99.8	-.68	-1.1	.3919	98.6	+.0932	+
1899.	58	111.5	+9	+15.5	61.66	99.9	-.76	-1.2	.4013	101.0	+.0838	+
1900.	63	121.2	+4	+6.3	61.43	99.5	-.53	-.9	.4174	105.0	+.0677	+
1901.	63	121.2	+4	+6.3	61.43	99.5	-.53	-.9	.4280	107.7	+.0571	+
1902.	67	128.8			60.99	98.8	-.69	-1.1	.4563	114.8	+.0286	+
1903.	67	128.8			60.90	98.7			.4851	122.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LUMBER—Concluded.

SAWYERS, CIRCULAR, Male.

[Data from 17 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	25	100.0	+10	+40.0	63.13	100.0	-1.96	-3.1	\$0.3381	100.0	+\$0.0244	+7.2
1890	23	92.0	+12	+52.2	63.74	101.0	-2.57	-4.0	.3545	104.9	+.0080	+2.3
1891	23	92.0	+12	+52.2	63.48	100.6	-2.31	-3.6	.3562	105.4	+.0063	+1.8
1892	22	88.0	+13	+59.1	63.64	100.8	-2.47	-3.9	.3474	102.8	+.0151	+4.3
1893	22	88.0	+13	+59.1	62.27	98.6	-1.10	-1.8	.3479	102.9	+.0146	+4.2
1894	22	88.0	+13	+59.1	62.27	98.6	-1.10	-1.8	.3420	101.2	+.0205	+6.0
1895	23	92.0	+12	+52.2	63.48	100.6	-2.31	-3.6	.3382	100.0	+.0243	+7.2
1896	25	100.0	+10	+40.0	63.44	100.5	-2.27	-3.6	.3364	99.5	+.0261	+7.8
1897	27	108.0	+8	+29.6	63.19	100.1	-2.02	-3.2	.3213	95.0	+.0412	+12.8
1898	29	116.0	+6	+20.7	62.97	99.7	-1.80	-2.9	.3207	94.9	+.0418	+13.0
1899	31	124.0	+4	+12.9	62.77	99.4	-1.60	-2.5	.3168	93.7	+.0457	+14.4
1900	33	132.0	+2	+6.1	62.24	98.6	-1.07	-1.7	.3255	96.3	+.0370	+11.4
1901	33	132.0	+2	+6.1	61.97	98.2	-.80	-1.3	.3366	99.6	+.0259	+7.7
1902	35	140.0	.....	.....	61.17	96.9	.....	.....	.3501	103.5	+.0124	+3.5
1903	35	140.0	.....	.....	61.17	96.9	.....	.....	.3625	107.2	.....	.....

SAWYERS, GANG, Male.

[Data from 17 establishments.]

Av. 1890-99.	27	100.0	+1	+3.7	62.08	100.0	-0.58	-0.9	\$0.2202	100.0	+\$0.0487	+22.1
1890	26	96.3	+2	+7.7	62.08	100.0	-.58	-.9	.2151	97.7	+.0538	+25.0
1891	26	96.3	+2	+7.7	62.08	100.0	-.58	-.9	.2150	97.6	+.0529	+25.1
1892	26	96.3	+2	+7.7	62.08	100.0	-.58	-.9	.2170	98.5	+.0519	+23.9
1893	27	100.0	+1	+3.7	62.22	100.2	-.72	-1.2	.2164	98.3	+.0525	+24.3
1894	27	100.0	+1	+3.7	62.22	100.2	-.72	-1.2	.2059	98.5	+.0630	+30.6
1895	29	107.4	-1	-3.4	62.07	100.0	-.57	-.9	.2096	95.2	+.0593	+28.3
1896	29	107.4	-1	-3.4	62.07	100.0	-.57	-.9	.2103	95.5	+.0586	+27.9
1897	27	100.0	+1	+3.7	62.00	99.9	-.50	-.8	.2356	107.0	+.0333	+14.1
1898	27	100.0	+1	+3.7	62.00	99.9	-.50	-.8	.2350	106.7	+.0339	+14.4
1899	27	100.0	+1	+3.7	62.00	99.9	-.50	-.8	.2422	110.0	+.0267	+11.0
1900	27	100.0	+1	+3.7	61.78	99.5	-.28	-.5	.2501	113.6	+.0188	+7.5
1901	27	100.0	+1	+3.7	61.78	99.5	-.28	-.5	.2542	115.4	+.0147	+5.8
1902	27	100.0	+1	+3.7	61.33	98.8	+.17	+.3	.2626	119.3	+.0063	+2.4
1903	28	103.7	.....	.....	61.50	99.1	.....	.....	.2689	122.1	.....	.....

TRIMMERS, Male.

[Data from 7 establishments.]

Av. 1890-99.	64	100.0	+36	+56.3	60.55	100.0	+0.41	+0.7	\$0.1966	100.0	-\$0.0038	-1.9
1890	47	78.4	+53	+112.8	60.77	100.4	+.19	+.3	.2235	113.7	-.0307	-13.7
1891	50	78.1	+50	+100.0	60.72	100.3	+.24	+.4	.2141	108.9	-.0213	-9.9
1892	56	87.5	+44	+78.6	60.64	100.1	+.32	+.5	.2086	106.1	-.0158	-7.6
1893	55	85.9	+45	+81.8	60.65	100.2	+.31	+.5	.2108	107.2	-.0180	-8.5
1894	51	79.7	+49	+96.1	60.59	100.1	+.37	+.6	.1911	97.2	+.0017	+.9
1895	51	79.7	+49	+96.1	60.59	100.1	+.37	+.6	.1914	97.4	+.0014	+.7
1896	61	100.0	+36	+56.3	60.47	99.9	+.49	+.8	.1780	90.5	+.0148	+8.3
1897	85	132.8	+15	+17.6	60.35	99.7	+.61	+1.0	.1847	88.9	+.0181	+10.4
1898	84	131.3	+16	+19.0	60.36	99.7	+.60	+1.0	.1857	89.5	+.0071	+3.8
1899	93	145.3	+7	+7.5	60.39	99.7	+.57	+.9	.1877	95.5	+.0351	+2.7
1900	99	154.7	+1	+1.0	60.36	99.7	+.60	+1.0	.1944	98.9	-.0016	-.8
1901	106	165.6	-6	-5.7	60.34	99.7	+.62	+1.0	.1951	99.2	-.0023	-1.2
1902	97	151.6	+3	+3.1	60.37	99.7	+.59	+1.0	.1891	96.2	+.0037	+2.0
1903	100	156.3	.....	.....	60.96	100.7	.....	.....	.1928	98.1	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continue

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for extent of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

MARBLE AND STONE WORK.

BED RUBBERS, Male.

[Data from 29 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.		
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase or decrease 1903 as compared with previous years.
			Number.	Per cent.			Number.	Per cent.			Amount.
Av. 1890-99.	145	100.0	+20	+13.8	56.59	100.0	-5.33	-9.4	\$0.239	100.0	+\$0.061
1890.	152	104.8	+13	+8.6	57.51	101.6	-6.25	-10.9	232	96.8	-0.032
1891.	147	101.4	+18	+12.2	56.93	100.6	-5.67	-10.0	2377	99.1	-0.009
1892.	152	104.8	+13	+8.6	56.91	100.6	-5.65	-9.9	2346	97.8	-0.062
1893.	156	107.6	+9	+5.8	56.99	100.7	-5.73	-10.1	2372	98.9	-0.044
1894.	134	92.4	+31	+23.1	56.70	100.2	-5.44	-9.6	2386	99.5	-0.022
1895.	145	100.0	+20	+13.8	56.91	100.6	-5.65	-9.9	2342	97.7	-0.077
1896.	131	90.3	+34	+26.0	56.27	99.4	-6.01	-8.9	2447	102.0	+0.073
1897.	143	98.6	+22	+15.4	56.49	99.8	-5.23	-9.3	2403	100.2	-0.002
1898.	144	99.3	+21	+14.6	56.51	99.9	-5.25	-9.3	2383	99.4	-0.022
1899.	141	97.2	+24	+17.0	54.72	96.7	-3.46	-6.3	2302	108.5	+0.081
1900.	142	97.9	+23	+16.2	54.82	96.9	-3.56	-6.5	2309	108.8	+0.086
1901.	161	111.0	+4	+2.5	53.80	95.1	-2.54	-4.7	2319	117.6	+0.019
1902.	171	117.9	-6	-3.5	53.22	94.0	-1.96	-3.7	2387	124.6	+0.082
1903.	165	113.8			51.26	90.6			3012	125.6	

CARVERS, Male.

[Data from 28 establishments.]

Av. 1890-99.	120	100.0	+5	+4.2	51.47	100.0	-3.62	-7.0	\$0.4492	100.0	+\$0.111
1890.	115	95.8	+10	+8.7	51.51	100.1	-3.69	-7.2	4454	99.2	-0.019
1891.	107	89.2	+18	+16.8	52.09	101.2	-4.24	-8.1	4285	95.4	-0.112
1892.	112	93.3	+13	+11.6	50.72	98.5	-2.87	-5.7	4481	99.8	-0.112
1893.	114	95.0	+11	+9.6	51.07	99.2	-3.22	-6.3	4455	99.2	-0.115
1894.	137	114.2	-12	-8.8	52.91	102.8	-5.06	-9.6	4324	96.3	-0.128
1895.	121	100.8	+4	+3.3	52.85	102.7	-5.00	-9.5	4179	93.0	-0.142
1896.	119	99.2	+6	+5.0	52.10	101.2	-4.25	-8.2	4663	103.8	+0.094
1897.	103	85.8	+22	+21.4	51.21	99.5	-3.36	-6.6	4658	103.7	+0.094
1898.	114	95.0	+11	+9.6	51.17	100.0	-3.62	-7.0	4602	102.4	+0.090
1899.	133	127.5	-28	-18.3	48.73	94.7	-1.88	-1.8	4820	107.3	+0.078
1900.	167	139.2	-42	-25.1	48.42	94.1	-1.57	-1.2	4851	108.0	+0.075
1901.	166	138.3	-41	-24.7	48.28	93.8	-1.43	-1.9	5213	116.1	+0.089
1902.	116	121.7	-21	-14.4	47.71	92.7	-1.14	+1.3	5616	123.0	+0.080
1903.	125	104.2			47.83	93.0			5607	124.8	

LABORERS, Male.

[Data from 18 establishments.]

Av. 1890-99.	202	100.0	-10	-5.0	57.00	100.0	-0.5	-0.9	\$0.1559	100.0	+\$0.019
1890.	214	105.9	-22	-10.3	58.73	103.0	-2.26	-3.9	1558	99.9	-0.019
1891.	208	103.0	-16	-7.7	58.17	102.1	-1.70	-2.9	1506	96.6	-0.034
1892.	221	109.4	-29	-13.1	57.93	101.6	-1.16	-2.5	1566	100.4	-0.018
1893.	211	104.5	-19	-9.0	57.69	101.2	-1.22	-2.1	1604	102.9	-0.014
1894.	190	94.1	+2	+1.1	56.81	99.7	-0.34	-1.6	1561	100.1	-0.019
1895.	190	94.1	+2	+1.1	56.94	99.9	-0.17	-1.8	1549	99.4	-0.020
1896.	196	97.0	-4	-2.0	56.92	99.9	-0.15	-1.8	1555	99.7	-0.019
1897.	201	99.5	-9	-4.5	56.35	98.9	-0.12	-1.2	1592	102.1	+0.016
1898.	199	98.5	-7	-3.5	56.38	99.1	-0.06	-1.1	1591	102.1	+0.016
1899.	190	94.1	+2	+1.1	57.95	101.6	-2.52	-4.7	1505	96.5	-0.034
1900.	173	85.6	+19	+11.0	57.25	100.4	-0.78	-1.4	1540	99.4	-0.020
1901.	216	107.9	-24	-11.1	56.73	99.6	-0.28	-1.5	1638	105.1	+0.014
1902.	218	107.9	-26	-11.9	56.56	98.9	-0.11	-1.2	1683	108.6	+0.069
1903.	192	95.0			56.47	99.1			1752	112.4	

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

MARBLE AND STONE WORK—Continued.

LETTERERS, Male.

[Data from 42 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (—) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	76	100.0	+ 8	+10.5	56.23	100.0	-4.74	-8.4	\$0.2992	100.0	+\$0.0539	+18.0
1890	74	97.4	+10	+13.5	56.95	101.3	-5.46	-9.6	.2921	97.6	+.0610	+20.9
1891	75	98.7	+ 9	+12.0	56.43	100.4	-4.94	-8.8	.2952	98.0	+.0599	+20.4
1892	73	96.1	+11	+15.1	56.82	99.3	-4.33	-7.8	.2963	99.0	+.0568	+19.2
1893	76	100.0	+ 8	+10.5	55.89	99.4	-4.40	-7.9	.2927	97.8	+.0604	+20.6
1894	72	94.7	+12	+16.7	56.46	100.4	-4.97	-8.7	.2964	99.1	+.0567	+19.1
1895	77	101.3	+ 7	+ 9.1	56.38	100.3	-4.89	-8.7	.2978	99.5	+.0553	+18.6
1896	72	94.7	+12	+16.7	56.25	100.0	-4.76	-8.5	.3053	102.0	+.0478	+15.7
1897	77	101.3	+ 7	+ 9.1	56.32	100.2	-4.83	-8.6	.3048	101.9	+.0483	+15.8
1898	79	103.9	+ 5	+ 6.3	55.96	99.5	-4.47	-8.0	.3060	102.3	+.0471	+15.4
1899	80	105.3	+ 4	+ 5.0	55.85	99.3	-4.36	-7.8	.3074	102.7	+.0457	+14.9
1900	81	106.6	+ 3	+ 3.7	54.28	96.5	-2.79	-5.1	.3175	106.1	+.0356	+11.2
1901	85	111.8	- 1	- 1.2	53.99	96.0	-2.50	-4.6	.3254	108.8	+.0277	+ 8.5
1902	86	113.2	- 2	- 2.3	53.64	95.4	-2.15	-4.0	.3376	112.8	+.0155	+ 4.6
1903	84	110.5			51.49	91.6			.3551	118.0		

MARBLE CUTTERS, Male.

[Data from 58 establishments.]

Av. 1890-99.	411	100.0	+128	+33.6	52.89	100.0	-3.71	-7.0	\$0.3518	100.0	+\$0.1040	+29.6
1890	437	106.3	+112	+28.6	54.33	102.7	-4.15	-9.5	.3369	95.8	+.1189	+35.3
1891	419	101.9	+100	+22.5	52.93	100.1	-3.72	-7.1	.3544	101.9	+.0974	+27.2
1892	406	98.8	+143	+35.2	52.70	99.6	-3.62	-6.7	.3527	100.3	+.1031	+29.2
1893	397	96.6	+152	+38.5	52.74	99.7	-3.56	-6.8	.3507	99.7	+.1051	+30.0
1894	363	88.3	+186	+51.2	53.39	100.9	-4.21	-7.9	.3372	95.8	+.1186	+34.2
1895	368	89.5	+181	+49.2	53.23	100.6	-4.05	-7.6	.3370	95.8	+.1188	+35.3
1896	383	93.2	+166	+43.3	53.09	100.4	-3.91	-7.4	.3548	100.9	+.1010	+28.5
1897	392	95.4	+157	+40.1	52.83	99.9	-3.65	-6.9	.3580	101.8	+.0978	+27.8
1898	403	98.1	+146	+36.2	52.84	99.9	-3.66	-6.9	.3564	101.3	+.0994	+27.9
1899	513	124.8	+ 36	+ 7.0	50.82	96.1	-1.64	-3.2	.3754	106.7	+.0804	+21.4
1900	534	129.9	+ 15	+ 2.8	50.48	95.4	-1.30	-2.6	.3826	108.8	+.0732	+19.1
1901	533	130.2	+ 14	+ 2.6	50.36	95.2	-1.18	-2.3	.4065	115.5	+.0493	+12.1
1902	527	128.2	+ 22	+ 4.2	50.22	95.0	-1.04	-2.1	.4338	123.3	+.0220	+ 5.1
1903	549	133.6			49.18	93.6			.4538	129.6		

MARBLE POLISHERS, Male.

[Data from 29 establishments.]

Av. 1890-99.	263	100.0	+54	+20.5	55.41	100.0	-3.44	-6.2	\$0.2193	100.0	+\$0.0619	+28.2
1890	261	99.2	+56	+21.5	56.68	102.3	-4.71	-8.3	.2139	97.5	+.0673	+31.5
1891	278	105.7	+39	+14.0	56.22	101.5	-4.25	-7.6	.2120	96.7	+.0692	+32.6
1892	285	108.4	+32	+11.2	55.66	100.5	-3.69	-6.6	.2188	99.8	+.0614	+28.5
1893	262	99.6	+55	+21.0	55.71	100.5	-3.74	-6.7	.2193	100.0	+.0619	+28.2
1894	273	103.8	+44	+16.1	55.78	100.7	-3.81	-6.8	.2036	93.8	+.0736	+36.8
1895	267	101.5	+50	+18.7	55.88	100.8	-3.91	-7.0	.2042	93.1	+.0770	+37.7
1896	225	85.6	+92	+40.9	55.02	99.3	-3.65	-5.5	.2222	101.3	+.0590	+26.6
1897	235	89.4	+82	+34.9	54.92	99.1	-2.95	-5.4	.2257	102.0	+.0575	+25.7
1898	245	93.2	+72	+29.4	55.12	99.5	-3.15	-5.7	.2239	103.0	+.0553	+24.5
1899	294	111.8	+23	+ 7.8	53.10	95.8	-1.13	-2.1	.2472	112.7	+.0340	+13.4
1900	308	117.1	+ 9	+ 2.9	53.31	96.2	-1.34	-2.5	.2461	112.2	+.0351	+14.3
1901	314	119.4	+ 3	+ 1.0	53.07	95.8	-1.10	-2.1	.2596	118.4	+.0216	+ 8.3
1902	316	120.2	+ 1	+ .3	53.46	96.5	-1.49	-2.8	.2695	122.9	+.0117	+ 4.3
1903	317	120.5			51.97	93.8			.2812	128.2		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

MUSICAL INSTRUMENTS, ORGANS:

ACTION MAKERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase decrease 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	
Av. 1890-99.	39	100.0	+27	+69.2	59.53	100.0	-2.65	-4.5	\$0.2337	100.0	-\$0.0069	
1890	45	115.4	+21	+46.7	59.56	100.1	-2.68	-4.5	.2284	97.7	-.0065	
1891	38	97.4	+28	+73.7	59.55	100.0	-2.67	-4.5	.2375	101.6	-.0127	
1892	41	105.1	+25	+61.0	59.54	100.0	-2.66	-4.5	.2385	102.1	-.0137	
1893	43	110.3	+23	+53.5	59.58	100.1	-2.70	-4.5	.2383	102.1	-.0137	
1894	35	89.7	+31	+88.6	59.46	99.9	-2.58	-4.3	.2264	96.9	-.0076	
1895	36	92.3	+30	+83.3	59.50	99.9	-2.62	-4.4	.2327	99.6	-.0072	
1896	39	100.0	+27	+69.2	59.51	100.0	-2.63	-4.4	.2363	101.1	-.0117	
1897	38	97.4	+28	+73.7	59.50	99.9	-2.62	-4.4	.2281	97.6	-.0063	
1898	36	92.3	+30	+83.3	59.50	99.9	-2.62	-4.4	.2365	101.2	-.0117	
1899	43	110.3	+23	+53.5	59.56	100.1	-2.68	-4.5	.2336	100.0	-.0088	
1900	42	107.7	+24	+57.1	57.69	96.9	-.81	-1.4	.2622	112.2	-.0571	
1901	43	110.3	+23	+53.5	57.67	96.9	-.79	-1.4	.2504	107.1	-.0526	
1902	43	110.3	+23	+53.5	57.84	97.2	-.96	-1.7	.2298	97.0	-.0070	
1903	66	169.2			56.88	95.5			.2148	96.2		

CASE MAKERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	31	100.0	+5	+16.1	59.89	100.0	-5.36	-8.9	\$0.2022	100.0	+\$0.0075	
1890	38	122.6	-2	-5.3	59.92	100.1	-5.39	-9.0	.1998	98.6	-.0144	
1891	37	119.4	-1	-2.7	59.92	100.1	-5.39	-9.0	.2032	100.5	-.0065	
1892	51	164.5	-15	-29.4	59.94	100.1	-5.41	-9.0	.2235	110.5	-.0178	
1893	31	100.0	+5	+16.1	59.90	100.0	-5.37	-9.0	.2249	111.2	-.0132	
1894	22	71.0	+14	+43.6	59.86	99.9	-5.35	-8.9	.2059	101.8	-.0128	
1895	28	90.3	+8	+28.6	59.89	100.0	-5.36	-8.9	.1956	96.7	-.0141	
1896	26	83.9	+10	+38.5	59.88	100.0	-5.35	-8.9	.2034	100.6	-.0067	
1897	22	71.0	+14	+43.6	59.86	99.9	-5.33	-8.9	.1999	94.4	-.0188	
1898	25	80.6	+11	+44.0	59.88	100.0	-5.35	-8.9	.1857	91.8	-.0219	
1899	28	90.3	+8	+28.6	59.89	100.0	-5.36	-8.9	.1897	93.8	-.0208	
1900	28	90.3	+8	+28.6	56.79	94.8	-2.26	-4.0	.1985	98.2	-.0112	
1901	21	77.4	+12	+50.0	56.83	94.9	-2.30	-4.0	.2132	105.9	-.0047	
1902	26	83.9	+10	+38.5	57.19	95.5	-2.66	-4.7	.2157	105.7	-.0050	
1903	56	115.1			54.55	91.1			.2007	103.7		

FINISHERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	19	100.0	+13	+68.4	53.67	100.0	-7.36	-12.3	\$0.2125	100.0	-\$0.0188	
1890	21	110.5	+11	+52.1	60.00	100.6	-7.69	-12.8	.1904	89.6	-.0412	
1891	20	105.3	+12	+60.0	60.00	100.6	-7.69	-12.8	.2180	102.6	-.0143	
1892	20	105.3	+12	+60.0	60.00	100.6	-7.69	-12.8	.2177	102.4	-.0146	
1893	17	89.5	+15	+82.2	60.00	100.6	-7.69	-12.8	.2131	114.4	-.0168	
1894	18	94.7	+14	+77.8	60.00	100.6	-7.69	-12.8	.2006	94.4	-.0317	
1895	23	121.1	+9	+59.1	60.00	100.6	-7.69	-12.8	.2218	104.4	-.0165	
1896	17	89.5	+15	+82.2	60.00	100.6	-7.69	-12.8	.2097	98.7	-.0228	
1897	18	94.7	+14	+77.8	59.00	98.9	-6.69	-11.3	.2078	98.7	-.0225	
1898	14	73.7	+18	+128.6	58.71	98.1	-7.40	-10.9	.2182	102.7	-.0141	
1899	21	126.3	+8	+41.3	59.00	98.9	-6.69	-11.3	.2210	91.9	-.0370	
1900	21	126.3	+8	+41.3	56.08	94.0	-3.77	-6.7	.2503	104.0	-.0113	
1901	28	147.4	1	+14.7	56.14	94.1	-3.8	-6.8	.2127	100.1	-.0196	
1902	19	102.6	1	+6.3	56.07	94.0	-3.75	-6.7	.2279	107.1	-.0047	
1903	22	95.1			52.55	88.5			.2207	102.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

MUSICAL INSTRUMENTS, ORGANS—Continued

MACHINE WOODWORKERS, Male.

[Data from 1 establishment.]

Year.	Employees				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	10	100.0	+6	+ 60.0	58.20	100.0	-4.20	- 7.2	\$0.2740	100.0	+\$0.0229	+ 8.4
1890.	8	80.0	+8	+100.0	60.00	103.1	-6.00	-10.0	.2715	99.1	+.0254	+ 9.4
1891.	8	80.0	+8	+100.0	60.00	103.1	-6.00	-10.0	.2715	99.1	+.0254	+ 9.4
1892.	10	100.0	+6	+ 60.0	60.00	103.1	-6.00	-10.0	.2725	99.5	+.0244	+ 9.0
1893.	11	110.0	+5	+ 45.5	60.00	103.1	-6.00	-10.0	.2780	101.5	+.0189	+ 6.8
1894.	9	90.0	+7	+ 77.8	60.00	103.1	-6.00	-10.0	.2805	102.4	+.0164	+ 5.8
1895.	12	120.0	+4	+ 33.3	60.00	103.1	-6.00	-10.0	.2786	99.9	+.0233	+ 8.5
1896.	10	100.0	+6	+ 60.0	60.00	103.1	-6.00	-10.0	.2750	100.4	+.0219	+ 8.0
1897.	9	90.0	+7	+ 77.8	54.00	92.8			.2685	98.0	+.0284	+10.6
1898.	9	90.0	+7	+ 77.8	54.00	92.8			.2685	98.0	+.0284	+10.6
1899.	9	90.0	+7	+ 77.8	54.00	92.8			.2805	102.4	+.0164	+ 5.8
1900.	10	100.0	+6	+ 60.0	54.00	92.8			.2975	108.6	+.0006	- 2
1901.	12	120.0	+4	+ 33.3	54.00	92.8			.2924	106.7	+.0045	+ 1.5
1902.	16	160.0			54.00	92.8			.2969	108.4		
1903.	16	160.0			54.00	92.8			.2969	108.4		

PIPE MAKERS, METAL, Male.

[Data from 1 establishment.]

Av. 1890-99.	10	100.0	+4	+40.0	58.20	100.0	-4.20	- 7.2	\$0.2967	100.0	-\$0.0056	-1.9
1890.	11	110.0	+3	+27.3	60.00	103.1	-6.00	-10.0	.2968	99.7	+.0043	+1.5
1891.	10	100.0	+4	+40.0	60.00	103.1	-6.00	-10.0	.2955	99.6	+.0044	+1.5
1892.	13	130.0	+1	+ 7.7	60.00	103.1	-6.00	-10.0	.2904	97.9	+.0007	+ .2
1893.	12	120.0	+2	+16.7	60.00	103.1	-6.00	-10.0	.2979	100.4	+.0068	+2.3
1894.	10	100.0	+4	+40.0	60.00	103.1	-6.00	-10.0	.3075	103.6	+.0164	+5.3
1895.	10	100.0	+4	+40.0	60.00	103.1	-6.00	-10.0	.2975	100.3	+.0064	+2.2
1896.	9	90.0	+5	+55.6	60.00	103.1	-6.00	-10.0	.2972	100.2	+.0061	+2.1
1897.	9	90.0	+5	+55.6	54.00	92.8			.2972	100.2	+.0061	+2.1
1898.	8	80.0	+6	+75.0	54.00	92.8			.3000	101.1	+.0089	+3.0
1899.	9	90.0	+5	+55.6	54.00	92.8			.2972	100.2	+.0061	+2.1
1900.	9	90.0	+5	+55.6	54.00	92.8			.3000	101.1	+.0089	+3.0
1901.	10	100.0	+4	+40.0	51.00	92.8			.2900	97.7	+.0011	+ .4
1902.	16	160.0	-2	-12.5	51.00	92.8			.2859	96.4	+.0052	+1.8
1903.	14	140.0			54.00	92.8			.2911	98.1		

PIPE-ORGAN BUILDERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	28	100.0	+28	+100.0	58.20	100.0	-4.20	- 7.2	\$0.3044	100.0	-\$0.0201	-6.6
1890.	26	92.9	+30	+115.4	60.00	103.1	-6.00	-10.0	.3040	99.9	+.0197	-6.5
1891.	23	82.1	+33	+143.5	60.00	103.1	-6.00	-10.0	.3037	99.8	+.0194	-6.4
1892.	30	107.1	+26	+ 86.7	60.00	103.1	-6.00	-10.0	.3093	101.6	+.0250	+8.1
1893.	28	100.0	+28	+100.0	60.00	103.1	-6.00	-10.0	.3038	99.8	+.0195	-6.4
1894.	24	85.7	+32	+133.3	60.00	103.1	-6.00	-10.0	.2988	98.2	+.0145	-4.9
1895.	32	114.3	+24	+ 75.0	60.00	103.1	-6.00	-10.0	.3028	99.5	+.0185	-6.1
1896.	26	92.9	+30	+115.4	60.00	103.1	-6.00	-10.0	.3066	100.7	+.0223	+7.3
1897.	26	92.9	+30	+115.4	54.00	92.8			.3066	100.7	+.0223	+7.3
1898.	26	92.9	+30	+115.4	54.00	92.8			.3066	100.7	+.0223	+7.3
1899.	36	128.6	+20	+ 55.6	54.00	92.8			.3013	99.0	+.0170	-5.6
1900.	40	142.9	+16	+ 40.0	54.00	92.8			.2989	98.2	+.0146	-4.9
1901.	48	171.4	+8	+ 16.7	54.00	92.8			.2928	96.2	+.0085	-2.9
1902.	61	217.9	-5	- 8.2	54.00	92.8			.2872	94.3	+.0029	-1.0
1903.	56	200.0			54.00	92.8			.2843	93.4		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 7.]

MUSICAL INSTRUMENTS, ORGANS—Concluded.

TUNERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase - decrease - 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	(%)
Av. 1890-99.	14	100.0	-4	-28.6	60.00	100.0	-7.50	-12.5	0.3177	100.0	\$-0.0112	-
1890.	17	121.4	-7	-41.2	60.00	100.0	-7.50	-12.5	.3184	100.2	-.0119	-
1891.	18	128.6	-8	-44.4	60.00	100.0	-7.50	-12.5	.3314	104.3	-.0249	-
1892.	17	121.4	-7	-41.2	60.00	100.0	-7.50	-12.5	.3299	103.8	-.0234	-
1893.	17	121.4	-7	-41.2	60.00	100.0	-7.50	-12.5	.3673	115.6	-.0608	-
1894.	9	64.3	+1	+11.1	60.00	100.0	-7.50	-12.5	.3603	113.4	-.0508	-
1895.	15	107.1	-6	-33.3	60.00	100.0	-7.50	-12.5	.3077	96.9	-.0012	-
1896.	13	92.9	-3	-23.1	60.00	100.0	-7.50	-12.5	.3069	96.6	-.0021	-
1897.	11	78.6	-1	-9.1	60.00	100.0	-7.50	-12.5	.2799	88.1	+.0266	-
1898.	11	78.6	-1	-9.1	60.00	100.0	-7.50	-12.5	.2749	86.5	+.0316	-
1899.	13	92.9	-3	-23.1	60.00	100.0	-7.50	-12.5	.3004	94.6	+.0061	-
1900.	13	92.9	-3	-23.1	56.54	94.2	-4.04	-7.1	.3941	124.0	-.0876	-
1901.	10	71.4	.....	.....	56.50	94.2	-4.00	-7.1	.3379	106.4	-.0314	-
1902.	12	85.7	-2	-16.7	56.50	94.2	-4.00	-7.1	.3077	96.9	-.0012	-
1903.	10	71.4	.....	.....	52.50	87.5	.....	.....	.3065	96.5	.....	-

VOICERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	3	100.0	+1	+33.3	58.20	100.0	-4.20	-7.2	\$0.4180	100.0	-\$0.0034	-
1890.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4128	98.8	+.0018	-
1891.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4128	98.8	+.0018	-
1892.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4194	100.3	-.0048	-
1893.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4194	100.3	-.0048	-
1894.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4194	100.3	-.0048	-
1895.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4194	100.3	-.0048	-
1896.	3	100.0	+1	+33.3	60.00	103.1	-6.00	-10.0	.4183	100.1	-.0057	-
1897.	3	100.0	+1	+33.3	54.00	92.8	.....	.....	.4194	100.3	-.0048	-
1898.	3	100.0	+1	+33.3	54.00	92.8	.....	.....	.4194	100.3	-.0048	-
1899.	3	100.0	+1	+33.3	54.00	92.8	.....	.....	.4194	100.3	-.0048	-
1900.	3	100.0	+1	+33.3	54.00	92.8	.....	.....	.4194	100.3	-.0048	-
1901.	3	100.0	+1	+33.3	54.00	92.8	.....	.....	.4194	100.3	-.0048	-
1902.	4	133.3	.....	.....	51.00	92.8	.....	.....	.4146	99.2	.....	-
1903.	4	133.3	.....	.....	51.00	92.8	.....	.....	.4146	99.2	.....	-

MUSICAL INSTRUMENTS, PIANOS.

ACTION MAKERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	36	100.0	+49	+87.5	59.48	100.0	-7.07	-11.8	\$0.2544	100.0	+\$0.0285	-
1890.	30	83.3	+75	+200.0	59.47	99.6	-6.86	-11.5	.2521	111.8	+.0092	-
1891.	36	100.0	+69	+191.7	59.50	99.7	-6.89	-11.6	.2451	112.2	-.0025	-
1892.	36	100.0	+69	+191.7	59.50	99.7	-6.89	-11.6	.3003	118.0	-.0174	-
1893.	40	111.1	+65	+182.5	59.68	100.0	-7.07	-11.8	.2586	101.7	-.0243	-
1894.	59	163.9	+46	+127.8	59.73	100.1	-7.12	-11.9	.2214	87.0	-.0515	-
1895.	71	194.4	+34	+93.9	59.76	100.1	-7.15	-12.0	.2147	86.2	-.0592	-
1896.	70	194.4	+34	+93.9	59.81	100.2	-7.24	-12.0	.2222	87.3	-.0507	-
1897.	66	183.3	+39	+107.1	59.77	100.2	-7.16	-12.0	.2308	90.7	-.0521	-
1898.	81	225.0	+29	+79.6	59.78	100.2	-7.17	-12.0	.2101	94.5	-.0625	-
1899.	67	186.1	+38	+105.6	59.76	100.1	-7.15	-12.0	.2183	97.6	-.0565	-
1900.	91	252.5	+14	+38.1	57.41	96.2	-4.80	-8.4	.2431	95.6	-.0394	-
1901.	88	244.4	+17	+47.3	57.52	96.4	-4.91	-8.5	.2583	101.6	-.0246	-
1902.	99	275.0	+6	+16.1	56.47	94.6	-3.94	-6.8	.2670	105.0	-.0340	-
1903.	105	287.5	.....	.....	52.61	88.2	.....	.....	.2829	111.2	.....	-

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

MUSICAL INSTRUMENTS, PIANOS—Continued.

ACTION REGULATORS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.				
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.		
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.	
Av. 1890-99.	32	100.0	+26	+ 81.3	59.40	100.0	-6.92	-11.6	\$0.2704	100.0	+\$0.0218	+ 8.1	
1890	15	46.9	+43	+286.7	59.20	99.7	-6.72	-11.4	.2915	107.8	+	.0007	+ .2
1891	20	62.6	+38	+190.0	59.40	100.0	-6.92	-11.6	.2732	101.0	+	.0190	+ 7.0
1892	24	75.0	+34	+141.7	59.25	99.7	-6.77	-11.4	.2527	93.5	+	.0395	+15.6
1893	26	81.3	+32	+123.1	59.31	99.8	-6.83	-11.5	.2787	103.1	+	.0135	+ 4.8
1894	25	78.1	+33	+132.0	59.28	99.8	-6.80	-11.5	.2556	94.5	+	.0366	+14.3
1895	34	106.3	+24	+ 70.6	59.47	100.1	-6.99	-11.8	.2581	95.5	+	.0341	+13.2
1896	33	103.1	+25	+ 75.8	59.45	100.1	-6.97	-11.7	.2894	107.0	+	.0028	+ 1.0
1897	33	103.1	+25	+ 75.8	59.45	100.1	-6.97	-11.7	.2779	102.8	+	.0143	+ 5.1
1898	34	106.3	+24	+ 70.6	59.47	100.1	-6.99	-11.8	.2789	103.1	+	.0133	+ 4.8
1899	71	221.9	-13	- 18.3	59.75	100.6	-7.27	-12.2	.2479	91.7	+	.0443	+17.9
1900	44	137.5	+14	+ 31.8	57.20	96.3	-4.72	- 8.3	.2830	104.7	+	.0092	+ 3.3
1901	46	143.8	+12	+ 26.1	57.17	96.2	-4.69	- 8.2	.2778	102.7	+	.0141	+ 5.2
1902	50	156.3	+ 8	+ 16.0	57.12	96.2	-4.64	- 8.1	.2288	104.6	+	.0094	+ 3.3
1903	58	181.3			52.48	88.4			.2922	108.1			

BELL MEN, Male.

[Data from 5 establishments.]

Av. 1890-99.	66	100.0	+42	+ 63.6	59.59	100.0	-6.18	-10.4	\$0.2745	100.0	+\$0.0598	+21.8	
1890	56	84.8	+52	+ 92.9	59.11	99.2	-5.70	- 9.6	.2820	102.7	+	.0523	+18.5
1891	64	97.0	+44	+ 68.8	59.11	99.2	-5.70	- 9.6	.2839	103.4	+	.0504	+17.8
1892	64	97.0	+44	+ 68.8	59.11	99.2	-5.70	- 9.6	.3096	112.8	+	.0247	+ 8.0
1893	59	89.4	+49	+ 83.1	59.19	99.3	-5.78	- 9.8	.2561	93.3	+	.0782	+30.6
1894	53	80.3	+55	+103.8	60.28	101.2	-6.87	-11.4	.2634	96.0	+	.0709	+26.9
1895	70	106.1	+38	+ 54.3	60.09	100.8	-6.68	-11.1	.2694	98.1	+	.0649	+24.1
1896	61	92.4	+47	+ 77.0	60.31	101.2	-6.90	-11.4	.2539	92.5	+	.0804	+31.7
1897	70	106.1	+38	+ 54.3	60.16	101.0	-6.75	-11.2	.2722	99.2	+	.0621	+22.8
1898	78	118.2	+30	+ 38.5	59.27	99.5	-5.86	- 9.9	.2627	95.7	+	.0716	+27.3
1899	86	130.3	+22	+ 25.6	59.30	99.6	-5.89	- 9.9	.2919	106.3	+	.0424	+14.5
1900	89	134.8	+19	+ 21.3	58.02	97.4	-4.61	- 7.9	.2761	100.6	+	.0582	+21.1
1901	97	147.0	+11	+ 11.3	57.97	97.3	-4.56	- 7.9	.2894	105.4	+	.0149	+15.5
1902	100	151.5	+ 8	+ 8.0	55.95	93.9	-2.54	- 4.5	.3050	111.1	+	.0298	+ 9.6
1903	108	163.6			53.41	89.6			.3343	121.8			

CASE MAKERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	141	100.0	+149	+105.7	59.79	100.0	-7.18	-12.0	\$0.2275	100.0	+\$0.0269	+11.8	
1890	88	62.4	+202	+229.5	59.63	99.7	-7.02	-11.8	.2692	118.3	+	.0148	+ 5.5
1891	93	66.0	+197	+211.8	59.73	99.9	-7.12	-11.9	.2481	109.1	+	.0063	+ 2.5
1892	128	90.8	+162	+126.6	59.73	99.9	-7.12	-11.9	.2300	101.1	+	.0241	+10.6
1893	109	77.3	+181	+166.1	59.83	100.1	-7.22	-12.1	.2364	103.9	+	.0180	+ 7.6
1894	141	100.0	+149	+105.7	59.82	100.1	-7.21	-12.1	.2173	95.5	+	.0371	+17.1
1895	160	113.5	+130	+ 81.3	59.83	100.1	-7.22	-12.1	.2191	96.3	+	.0353	+16.1
1896	149	105.7	+141	+ 94.6	59.87	100.1	-7.26	-12.1	.2086	91.7	+	.0458	+22.0
1897	143	101.4	+147	+102.8	59.83	100.1	-7.22	-12.1	.2099	92.3	+	.0445	+21.2
1898	174	123.4	+116	+ 66.7	59.83	100.1	-7.22	-12.1	.2196	96.5	+	.0348	+15.8
1899	224	158.9	+ 66	+ 29.5	59.84	100.1	-7.23	-12.1	.2165	95.2	+	.0379	+17.5
1900	243	172.5	+ 47	+ 19.3	57.34	95.9	-4.73	- 8.2	.2247	98.8	+	.0297	+13.2
1901	268	190.1	+ 22	+ 8.2	57.25	95.8	-4.64	- 8.1	.2310	101.5	+	.0234	+10.1
1902	266	188.7	+ 24	+ 9.0	56.49	94.5	-3.88	- 6.9	.2342	102.9	+	.0202	+ 8.6
1903	290	205.7			52.61	88.0			.2544	111.8			

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

MUSICAL INSTRUMENTS, PIANOS—Continued.

FINISHERS, Male.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	97	100.0	+118	+121.6	59.53	100.0	-7.05	-11.8	\$0.2648	100.0	+\$0.0199	+
1890.	51	52.6	+164	+321.6	59.27	99.6	-6.79	-11.5	.2777	104.9	+	.0070
1891.	57	58.8	+158	+277.2	59.21	99.5	-6.73	-11.4	.3021	114.1	+	.0174
1892.	74	76.3	+141	+190.5	59.39	99.8	-6.91	-11.6	.2782	105.1	+	.0065
1893.	90	92.8	+125	+138.9	59.51	100.0	-7.03	-11.8	.2751	103.9	+	.0085
1894.	85	87.6	+130	+152.9	59.51	100.0	-7.03	-11.8	.2425	91.6	+	.0422
1895.	106	109.3	+109	+102.8	59.66	100.2	-7.18	-12.0	.2581	97.5	+	.0266
1896.	102	105.2	+113	+110.8	59.65	100.2	-7.17	-12.0	.2632	99.4	+	.0215
1897.	108	111.3	+107	+99.1	59.65	100.2	-7.17	-12.0	.2585	97.6	+	.0262
1898.	141	145.4	+74	+52.5	59.72	100.3	-7.24	-12.1	.2396	90.5	+	.0451
1899.	154	158.8	+61	+39.6	59.69	100.3	-7.21	-12.1	.2332	85.6	+	.0315
1900.	159	163.9	+56	+35.2	57.13	96.0	-4.65	-8.1	.2616	98.8	+	.0231
1901.	159	163.9	+56	+35.2	57.04	95.8	-4.56	-8.0	.2671	100.9	+	.0178
1902.	191	196.9	+24	+12.6	56.40	94.7	-3.92	-7.0	.2727	103.0	+	.0120
1903.	215	221.6			52.48	88.2			.2847	107.5		

FLY FINISHERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	37	100.0	+34	+91.9	59.13	100.0	-5.64	-9.5	\$0.2897	100.0	+\$0.0285	+
1890.	30	81.1	+41	+136.7	58.90	99.6	-5.41	-9.2	.2936	101.3	+	.0246
1891.	39	105.4	+32	+82.1	58.97	99.7	-6.48	-9.3	.3096	106.9	+	.0066
1892.	41	110.8	+30	+73.2	59.02	99.8	-5.53	-9.4	.3123	107.8	+	.0059
1893.	30	81.1	+41	+136.7	59.07	99.9	-5.58	-9.4	.2931	101.2	+	.0251
1894.	33	89.2	+38	+115.2	59.09	99.9	-5.60	-9.5	.2897	100.0	+	.0285
1895.	29	78.1	+42	+144.8	59.14	100.0	-5.65	-9.6	.2739	94.5	+	.0445
1896.	35	94.6	+36	+102.9	59.23	100.2	-5.74	-9.7	.2696	93.1	+	.0486
1897.	45	121.6	+26	+57.8	59.40	100.5	-5.91	-9.9	.2967	102.4	+	.0215
1898.	42	113.5	+29	+69.0	59.18	100.1	-5.69	-9.6	.2754	95.1	+	.0428
1899.	46	124.3	+25	+51.3	59.26	100.2	-5.77	-9.7	.2833	97.8	+	.0349
1900.	52	140.5	+19	+36.5	58.19	98.4	-4.70	-8.1	.2887	99.7	+	.0226
1901.	59	159.5	+12	+20.3	58.08	98.2	-4.59	-7.9	.2858	98.7	+	.0324
1902.	67	181.1	+4	+6.0	56.07	94.8	-2.54	-4.5	.3357	115.9	+	.0177
1903.	71	191.9			55.49	90.5			.3182	109.8		

KEY MAKERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	19	100.0	+6	+31.6	59.36	100.0	-5.36	-9.0	\$0.2835	100.0	+\$0.0832	+
1890.	25	131.6			59.28	99.9	-5.28	-8.9	.2916	102.9	+	.0751
1891.	25	131.6			59.24	99.8	-5.24	-8.8	.2938	103.6	+	.0729
1892.	16	84.2	+9	+56.3	59.44	100.1	-5.44	-9.2	.2983	102.0	+	.0774
1893.	14	73.7	+11	+78.6	59.43	100.1	-5.43	-9.1	.2985	103.5	+	.0732
1894.	17	89.5	+8	+47.1	59.35	100.0	-5.35	-9.0	.2706	95.4	+	.0961
1895.	21	110.5	+4	+19.0	59.29	99.9	-5.29	-8.9	.2865	104.6	+	.0702
1896.	17	89.5	+8	+47.1	59.41	100.1	-5.41	-9.1	.2464	86.9	+	.1293
1897.	14	73.7	+11	+78.6	59.43	100.1	-5.43	-9.1	.2620	92.4	+	.1047
1898.	20	105.3	+5	+25.0	59.35	100.0	-5.35	-9.0	.2850	104.1	+	.0717
1899.	19	100.0	+6	+31.6	59.37	100.0	-5.37	-9.0	.2893	104.5	+	.0704
1900.	21	110.5	+4	+19.0	59.38	100.0	-5.38	-9.1	.3009	106.1	+	.0658
1901.	18	94.7	+7	+38.9	59.44	100.1	-5.44	-9.2	.3087	108.9	+	.0580
1902.	22	115.8	+3	+13.6	56.18	94.6	-2.18	-3.9	.3475	122.6	+	.0192
1903.	25	131.6			54.00	91.0			.3677	129.3		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

MUSICAL INSTRUMENTS, PIANOS—Continued.

POLISHERS, Male.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	36	100.0	+23	+ 63.9	59.31	100.0	-6.33	-10.7	\$0.2699	100.0	+\$0.0242	+ 9.0
1890	27	75.0	+32	+118.5	59.11	99.7	-6.13	-10.4	.2628	97.4	+.0313	+11.9
1891	33	91.7	+26	+ 78.8	59.27	99.9	-6.29	-10.6	.2598	96.3	+.0343	+13.2
1892	34	94.4	+25	+ 73.5	59.29	100.0	-6.31	-10.6	.2711	100.4	+.0290	+ 8.5
1893	35	97.2	+24	+ 68.6	59.31	100.0	-6.33	-10.7	.2846	105.2	+.0101	+ 3.9
1894	36	100.0	+23	+ 63.9	59.35	100.0	-6.35	-10.7	.2846	98.0	+.0235	+11.1
1895	41	113.9	+18	+ 43.9	59.41	100.2	-6.43	-10.8	.2857	105.9	+.0084	+ 2.9
1896	39	108.3	+20	+ 51.3	59.38	100.1	-6.40	-10.8	.2766	102.5	+.0175	+ 6.3
1897	39	108.3	+20	+ 51.3	59.38	100.1	-6.40	-10.8	.2580	95.6	+.0361	+14.0
1898	35	97.2	+24	+ 68.6	59.31	100.0	-6.33	-10.7	.2676	99.1	+.0265	+ 9.9
1899	44	122.2	+15	+ 34.1	59.32	100.0	-6.34	-10.7	.2691	99.7	+.0250	+ 9.3
1900	39	108.3	+20	+ 51.3	57.90	97.6	-4.92	-8.6	.2694	107.2	+.0047	+ 1.6
1901	53	147.2	+ 6	+ 11.3	57.53	97.0	-4.55	-7.9	.2739	106.7	+.0062	+ 2.3
1902	57	158.3	+ 2	+ 3.6	57.46	96.9	-4.48	-7.8	.2778	101.4	+.0203	+ 7.4
1903	59	163.9			52.98	89.3			.2941	109.0		

RUBBERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	28	100.0	+4	+14.3	59.18	100.0	-5.18	-8.8	\$0.2322	100.0	+\$0.0230	+ 9.9
1890	29	103.6	+3	+10.3	59.17	100.0	-5.17	-8.7	.2323	100.0	+.0229	+ 9.9
1891	28	100.0	+4	+14.3	59.14	99.9	-5.14	-8.7	.2325	100.1	+.0227	+ 9.8
1892	27	96.4	+5	+18.5	59.11	99.9	-5.11	-8.6	.2328	100.3	+.0224	+ 9.6
1893	27	96.4	+5	+18.5	59.11	99.9	-5.11	-8.6	.2328	100.3	+.0224	+ 9.6
1894	26	92.9	+6	+23.1	59.08	99.8	-5.08	-8.6	.2331	100.4	+.0221	+ 9.5
1895	27	96.4	+5	+18.5	59.11	99.9	-5.11	-8.6	.2328	100.3	+.0224	+ 9.6
1896	26	92.9	+6	+23.1	59.77	101.0	-5.77	-9.7	.2277	98.1	+.0275	+12.1
1897	26	92.9	+6	+23.1	59.31	100.2	-5.31	-9.0	.2304	99.2	+.0248	+10.8
1898	28	100.0	+4	+14.3	58.93	99.6	-4.93	-8.4	.2338	100.7	+.0214	+ 9.2
1899	31	110.7	+1	+ 3.2	59.03	99.7	-5.03	-8.5	.2341	100.8	+.0211	+ 9.0
1900	33	117.9	-1	- 3.0	59.09	99.8	-5.09	-8.6	.2336	100.6	+.0216	+ 9.2
1901	33	117.9	-1	- 3.0	59.09	99.8	-5.09	-8.6	.2336	100.6	+.0216	+ 9.2
1902	33	117.9	-1	- 3.0	59.09	99.8	-5.09	-8.6	.2336	100.6	+.0216	+ 9.2
1903	32	114.3			54.00	91.2			.2532	109.9		

STRINGERS, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 2 establishments, 1890, 1891; 3 establishments, 1892-1903.]

Av. 1890-99.	3	100.0	+1	+33.3	58.80	100.0	-6.07	-10.3	\$0.2501	100.0	+\$0.0059	+ 2.4
1890	3	100.0	+1	+33.3	58.00	98.6	-5.27	-9.1	.2388	119.5	+.0428	+14.3
1891	4	133.3			58.50	99.5	-5.77	-9.9	.2391	119.6	+.0431	+14.4
1892	4	133.3			59.00	100.3	-6.27	-10.6	.2460	98.4	+.0100	+ 4.1
1893	3	100.0	+1	+33.3	58.80	100.0	-6.07	-10.3	.2505	100.2	+.0055	+ 2.2
1894	3	100.0	+1	+33.3	58.80	100.0	-6.07	-10.3	.2379	95.1	+.0181	+ 7.6
1895	3	100.0	+1	+33.3	59.14	100.6	-6.41	-10.8	.2082	83.2	+.0478	+23.0
1896	3	100.0	+1	+33.3	58.80	100.0	-6.07	-10.3	.2501	100.0	+.0059	+ 2.4
1897	3	100.0	+1	+33.3	59.00	100.3	-6.27	-10.6	.2246	89.8	+.0314	+14.0
1898	3	100.0	+1	+33.3	59.00	100.3	-6.27	-10.6	.2260	90.4	+.0300	+13.3
1899	4	133.3			59.00	100.3	-6.27	-10.6	.2595	103.8	+.0035	- 1.3
1900	4	133.3			57.30	97.4	-4.57	-8.0	.2148	85.9	+.0412	+19.2
1901	4	133.3			57.44	97.7	-4.71	-8.2	.2344	93.7	+.0216	+ 9.2
1902	4	133.3			57.30	97.4	-4.57	-8.0	.2377	95.0	+.0183	+ 7.7
1903	4	133.3			52.73	89.7			.2500	102.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

MUSICAL INSTRUMENTS, PIANOS—Concluded.

TONE REGULATORS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	5	100.0	+3	+ 60.0	57.40	100.0	- 3.40	- 5.9	\$0.3340	100.0	+ \$0.0271	+ 8.1
1890	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1891	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1892	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1893	4	80.0	+4	+100.0	57.00	99.3	- 3.00	- 5.3	.3324	99.5	+ .0287	+ 8.0
1894	4	80.0	+4	+100.0	57.00	99.3	- 3.00	- 5.3	.3324	99.5	+ .0287	+ 8.0
1895	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1896	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1897	5	100.0	+3	+ 60.0	57.60	100.3	- 3.60	- 6.3	.3359	100.6	+ .0282	+ 10.2
1898	6	120.0	+2	+ 33.3	57.00	99.3	- 3.00	- 5.3	.3244	97.1	+ .0367	+ 11.1
1899	7	140.0	+1	+ 14.3	57.43	100.1	- 3.43	- 6.0	.3349	100.3	+ .0280	+ 7.7
1900	7	140.0	+1	+ 14.3	57.43	100.1	- 3.43	- 6.0	.3349	100.3	+ .0280	+ 7.7
1901	8	160.0	.....	.....	57.75	100.6	- 3.75	- 6.5	.3368	100.8	+ .0243	+ 7.2
1902	8	160.0	.....	.....	57.75	100.6	- 3.75	- 6.5	.3368	100.8	+ .0243	+ 7.2
1903	8	160.0	.....	.....	51.00	94.1	.....	.....	.3611	108.1	.....	.....

TUNERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	16	100.0	+17	+106.3	58.74	100.0	- 6.13	-10.4	\$0.2103	100.0	+ \$0.0708	+ 33.2
1890	8	50.0	+25	+312.5	57.75	98.3	- 5.14	- 8.9	.2473	117.6	+ .0336	+ 15.5
1891	10	62.5	+23	+230.0	58.20	99.1	- 5.59	- 9.6	.2267	108.7	+ .0522	+ 24.8
1892	13	81.3	+20	+153.8	58.62	99.8	- 6.01	-10.3	.1964	98.4	+ .0845	+ 40.2
1893	17	106.3	+16	+ 94.1	58.94	100.3	- 6.33	-10.7	.2000	95.1	+ .0809	+ 38.0
1894	19	118.8	+14	+ 73.7	59.05	100.5	- 6.44	-10.9	.1941	92.3	+ .0868	+ 40.8
1895	19	118.8	+14	+ 73.7	59.05	100.5	- 6.44	-10.9	.2065	98.2	+ .0744	+ 35.4
1896	18	112.5	+15	+ 83.3	59.00	100.4	- 6.39	-10.8	.2112	100.4	+ .0697	+ 33.2
1897	17	106.3	+16	+ 94.1	58.94	100.3	- 6.33	-10.7	.2107	100.2	+ .0702	+ 33.0
1898	15	93.8	+18	+120.0	58.80	100.1	- 6.19	-10.5	.2147	102.1	+ .0642	+ 30.5
1899	19	118.8	+14	+ 73.7	59.05	100.5	- 6.44	-10.9	.1938	92.2	+ .0871	+ 44.8
1900	32	200.0	+1	+ 3.1	57.05	97.1	- 4.42	- 7.8	.2327	110.7	+ .0482	+ 23.0
1901	28	175.0	+5	+17.9	57.11	97.2	- 4.50	- 7.9	.2565	122.0	+ .0240	+ 7.2
1902	35	218.8	- 2	- 5.7	57.00	97.0	- 4.39	- 7.7	.2639	125.5	+ .0170	+ 4.3
1903	33	206.3	.....	.....	52.61	89.6	.....	.....	.2009	133.6	.....	.....

OIL, COTTON SEED.

CAKE STRIPPERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	12	100.0	+3	+25.0	84.00	100.0	.....	.....	\$0.1125	100.0	+ \$0.0250	+ 22.2
1890	14	116.7	+1	+ 7.1	84.00	100.0	.....	.....	.1250	111.1	+ .0125	+ 11.1
1891	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1250	111.1	+ .0125	+ 11.1
1892	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1250	111.1	+ .0125	+ 11.1
1893	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1250	111.1	+ .0125	+ 11.1
1894	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1895	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1896	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1897	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1898	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1899	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1900	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1901	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1042	92.6	+ .0333	+ 35.6
1902	12	100.0	+3	+25.0	84.00	100.0	.....	.....	.1250	111.1	+ .0125	+ 11.1
1903	15	125.0	.....	.....	81.00	100.0	.....	.....	.1375	122.2	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

OIL, COTTON SEED—Continued.

GRINDERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	3	100.0	.....	.....	72.00	100.0	.....	.....	\$0.0792	100.0	+\$0.0041	+5.2
1890	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1891	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1892	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1893	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1894	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1895	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1896	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1897	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1898	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1899	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1900	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1901	3	100.0	.....	.....	72.00	100.0	.....	.....	.0792	100.0	+ .0041	+5.2
1902	3	100.0	.....	.....	72.00	100.0	.....	.....	.0833	105.2	+ .0041	+5.2
1903	3	100.0	.....	.....	72.00	100.0	.....	.....	.0833	105.2	.....	.....

HULLERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	5	100.0	+2	+40.0	72.00	100.0	.....	.....	\$0.0600	100.0	+\$0.0025	+4.2
1890	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1891	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1892	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1893	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1894	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1895	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1896	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1897	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1898	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1899	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1900	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1901	5	100.0	+2	+40.0	72.00	100.0	.....	.....	.0600	100.0	+ .0025	+4.2
1902	6	120.0	+1	+16.7	72.00	100.0	.....	.....	.0653	108.8	+ .0028	+4.3
1903	7	140.0	.....	.....	72.00	100.0	.....	.....	.0625	104.2	.....	.....

LINTERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	16	100.0	-1	-6.3	80.00	100.0	-2.50	-3.1	\$0.1090	100.0	-\$0.0012	-1.1
1890	14	87.5	+1	+7.1	80.00	98.9	-1.60	-2.0	.1202	110.3	-.0124	-10.3
1891	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1182	108.4	-.0104	-8.8
1892	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1182	108.4	-.0104	-8.8
1893	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1182	108.4	-.0104	-8.8
1894	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1895	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1896	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1897	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1898	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1899	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1900	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1901	16	100.0	-1	-6.3	81.00	100.1	-2.60	-3.2	.1026	94.1	+.0052	+5.1
1902	21	131.2	-6	-28.6	78.86	97.6	-.46	-.6	.1075	98.6	+.0003	+.3
1903	15	93.8	.....	.....	78.40	96.9	.....	.....	.1078	99.9	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

OIL, COTTON SEED—Concluded.

PRESSERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase or decrease in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	33	100.0	+ 5	+15.2	80.39	100.0	-2.07	-2.6	\$0.1341	100.0	-\$0.005	-
1890	28	84.8	+10	+35.7	79.71	99.2	-1.39	-1.7	.1384	103.2	-.0101	-
1891	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1434	106.9	-.0151	-1
1892	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1434	106.9	-.0151	-1
1893	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1434	106.9	-.0151	-1
1894	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1895	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1896	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1897	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1898	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1899	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1900	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1901	34	103.0	+ 4	+11.8	80.47	100.1	-2.15	-2.7	.1287	96.0	-.004	-
1902	38	115.2			79.58	99.0	-1.26	-1.6	.1393	103.9	-.0110	-
1903	38	115.2			78.32	97.4			.1293	95.7		

OIL, LINSEED.

LABORERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	10	100.0	- 8	-80.0	60.00	100.0			\$0.1500	100.0	-\$0.0100	-
1890	30	300.0	-28	-93.0	60.00	100.0			.1500	100.0	-.0100	-
1891	10	100.0	- 8	-80.0	60.00	100.0			.1500	100.0	-.0100	-
1892	14	140.0	-12	-85.7	60.00	100.0			.1500	100.0	-.0100	-
1893	11	110.0	- 9	-81.8	60.00	100.0			.1500	100.0	-.0100	-
1894	10	100.0	- 8	-80.0	60.00	100.0			.1500	100.0	-.0100	-
1895	5	50.0	- 3	-60.0	60.00	100.0			.1500	100.0	-.0100	-
1896	8	80.0	- 6	-75.0	60.00	100.0			.1500	100.0	-.0100	-
1897	5	50.0	- 3	-60.0	60.00	100.0			.1500	100.0	-.0100	-
1898	4	40.0	- 2	-50.0	60.00	100.0			.1500	100.0	-.0100	-
1899	6	60.0	- 4	-66.7	60.00	100.0			.1500	100.0	-.0100	-
1900	4	40.0	- 2	-50.0	60.00	100.0			.1500	100.0	-.0100	-
1901	6	60.0	- 4	-66.7	60.00	100.0			.1600	106.7	-.0057	-
1902	6	60.0	- 3	-50.0	60.00	100.0			.1600	106.7	-.0057	-
1903	2	20.0			60.00	100.0			.1600	106.7		

MOLDERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	4	100.0			60.00	100.0	+9.00	+15.0	0.1700	100.0	+\$0.0257	+
1890	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1891	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1892	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1893	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1894	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1895	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1896	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1897	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1898	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1899	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1900	4	100.0			60.00	100.0	+9.00	+15.0	.1700	100.0	+.0257	+
1901	4	100.0			69.00	115.0			.1857	115.1		
1902	4	100.0			69.00	115.0			.1857	115.1		
1903	4	100.0			69.00	115.0			.1857	115.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

OIL, LINSEED—Continued.

PRESSMEN, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	34	100.0	-10	-29.4	71.19	100.0	+0.31	+0.4	\$0.1639	100.0	+\$0.0104	+6.3
1890	36	105.9	-12	-33.3	72.89	102.4	-1.39	-1.9	.1622	99.0	+.0121	+7.5
1891	37	108.8	-13	-35.1	72.95	102.5	-1.45	-2.0	.1622	99.0	+.0121	+7.5
1892	41	120.6	-17	-41.5	73.10	102.7	-1.60	-2.2	.1649	100.6	+.0094	+5.7
1893	31	91.2	-7	-22.6	70.45	99.0	+1.05	+1.5	.1654	101.2	+.0085	+5.1
1894	22	64.7	+2	+9.1	69.82	98.1	+1.68	+2.4	.1673	102.1	+.0070	+4.2
1895	24	70.6			70.00	98.3	+1.50	+2.1	.1675	102.2	+.0068	+4.1
1896	36	105.9	-12	-33.3	70.67	99.3	+.83	+1.2	.1622	99.0	+.0121	+7.5
1897	38	111.8	-14	-36.8	70.74	99.4	+.76	+1.1	.1621	98.9	+.0122	+7.5
1898	32	94.1	-8	-25.9	70.50	99.0	+1.00	+1.4	.1625	99.1	+.0118	+7.3
1899	38	111.8	-14	-36.8	70.74	99.4	+.76	+1.1	.1621	98.9	+.0122	+7.5
1900	40	117.6	-16	-40.0	70.80	99.5	+.70	+1.0	.1620	98.8	+.0123	+7.6
1901	27	79.4	-3	-11.1	71.56	100.5	-.06	-.1	.1738	106.0	+.0005	+.3
1902	23	67.6	+1	+4.3	71.48	100.4	+.02	+.03	.1745	106.5	-.0002	-.1
1903	24	70.6			71.50	100.4			.1743	106.3		

REFINERS, Male.

[Data from 1 establishment.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Wages per hour.
			Num-ber.	Per-cent.		Num-ber.	Per-cent.
Av. 1890-99.	2	100.0	+1	+50.0	60.00	100.0	\$0.2256
1890	1	50.0	+2	+200.0	60.00	100.0	.2500
1891	1	50.0	+2	+200.0	60.00	100.0	.2500
1892	1	50.0	+2	+200.0	60.00	100.0	.2500
1893	1	50.0	+2	+200.0	60.00	100.0	.2500
1894	2	100.0	+1	+50.0	60.00	100.0	.2250
1895	3	150.0			60.00	100.0	.2000
1896	3	150.0			60.00	100.0	.2000
1897	3	150.0			60.00	100.0	.2033
1898	3	150.0			60.00	100.0	.2156
1899	3	150.0			60.00	100.0	.2122
1900	3	150.0			60.00	100.0	.2222
1901	3	150.0			60.00	100.0	.2222
1902	3	150.0			60.00	100.0	.2278
1903	3	150.0			60.00	100.0	.2278

ROLLER MEN, Male.

[Data from 1 establishment.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Wages per hour.
			Num-ber.	Per-cent.		Num-ber.	Per-cent.
Av. 1890-99.	2	100.0			72.75	100.0	\$0.2000
1890	2	100.0			74.50	102.4	.1600
1891	2	100.0			74.50	102.4	.1600
1892	2	100.0			74.50	102.4	.2200
1893	2	100.0			72.00	99.0	.2200
1894	2	100.0			72.00	99.0	.2200
1895	2	100.0			72.00	99.0	.2200
1896	2	100.0			72.00	99.0	.2200
1897	2	100.0			72.00	99.0	.2000
1898	2	100.0			72.00	99.0	.2000
1899	2	100.0			72.00	99.0	.1800
1900	2	100.0			72.00	99.0	.1800
1901	2	100.0			72.00	99.0	.1800
1902	2	100.0			72.00	99.0	.1800
1903	2	100.0			72.00	99.0	.1800

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for effect of increase (+) or decrease (-) in 1903, as compared with previous years, see note on p. 6.]

PAPER AND WOOD PULP—Continued.

BEATERS, Male.

[Data from 14 establishments.]

Year.	Employees.				Hours per week.				Wages per h.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Incre-dece 1903 compared sp.	Amount.
Av. 1890-99.	189	100.0	+38	+20.1	69.78	100.0	-7.53	-10.8	\$0.1527	100.0	+	\$0.00
1890	185	97.9	+42	+22.7	70.12	100.5	-7.87	-11.2	.1456	95.4	+	.00
1891	194	102.6	+33	+17.0	69.97	100.3	-7.72	-11.0	.1510	98.9	+	.00
1892	192	101.6	+35	+18.2	70.06	100.4	-7.81	-11.1	.1506	98.6	+	.00
1893	188	99.5	+39	+20.7	70.40	100.9	-8.15	-11.6	.1504	98.5	+	.00
1894	185	97.9	+42	+22.7	70.18	100.6	-7.93	-11.3	.1529	100.1	+	.00
1895	180	95.2	+47	+26.1	70.20	100.6	-7.95	-11.3	.1526	99.9	+	.00
1896	190	100.5	+37	+19.5	69.41	99.5	-7.16	-10.3	.1537	100.7	+	.00
1897	190	100.5	+37	+19.5	70.17	100.6	-7.92	-11.3	.1533	100.4	+	.00
1898	186	98.4	+41	+22.0	70.13	100.5	-7.88	-11.2	.1524	99.8	+	.00
1899	198	104.8	+29	+14.6	67.15	96.2	-4.90	-7.3	.1642	107.5	+	.00
1900	201	107.9	+23	+11.3	66.88	95.8	-4.63	-6.9	.1660	108.7	+	.00
1901	205	108.5	+22	+10.7	64.33	92.2	-2.08	-3.2	.1743	114.1	+	.00
1902	212	112.2	+15	+ 7.1	63.32	90.7	-1.07	-1.7	.1784	116.8	+	.00
1903	227	120.1	.....	.....	62.25	89.2	.....	.....	.1882	123.2	.....	.....

BLACK ASH BURNERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	17	100.0	-1	- 5.9	60.45	100.0	- 9.45	-15.6	\$0.1732	100.0	+	\$0.00
1890	19	111.8	-3	-15.8	61.26	101.3	-10.26	-16.7	.1569	90.6	+	.00
1891	13	76.5	+3	+23.1	61.85	102.3	-10.85	-17.5	.1726	99.7	+	.00
1892	17	100.0	-1	- 5.9	61.41	101.6	-10.41	-17.0	.1650	95.3	+	.00
1893	15	88.2	+1	+ 6.7	61.60	101.9	-10.60	-17.2	.1654	95.5	+	.00
1894	19	111.8	-3	-15.8	61.26	101.3	-10.26	-16.7	.1682	97.1	+	.00
1895	19	111.8	-3	-15.8	61.26	101.3	-10.26	-16.7	.1632	94.2	+	.00
1896	18	105.9	-2	-11.1	61.33	101.5	-10.33	-16.8	.1766	102.5	+	.00
1897	25	147.1	-9	-36.0	60.96	100.8	- 9.86	-16.3	.1775	102.0	+	.00
1898	15	88.2	+1	+ 6.7	61.60	101.9	-10.60	-17.2	.1734	100.1	+	.00
1899	12	70.6	+4	+33.3	52.00	86.0	- 1.00	- 1.9	.2129	122.9	+	.00
1900	22	129.4	-6	-27.3	50.18	83.0	+ .82	+ 1.6	.1957	113.0	+	.00
1901	11	64.7	+5	+45.5	52.36	86.6	- 1.36	- 2.6	.2095	121.0	+	.00
1902	11	64.7	+5	+45.5	52.36	86.6	- 1.36	- 2.6	.2095	121.0	+	.00
1903	16	94.1	.....	.....	51.00	84.4	.....	.....	.2351	135.7	.....	.....

BLEACHERS, Male.

[Data from 7 establishments.]

Av. 1890-99.	68	100.0	- 7	-10.3	63.85	100.0	-3.33	-5.2	\$0.1525	100.0	+	\$0.00
1890	81	119.1	-20	-24.7	63.26	99.1	-2.74	-4.3	.1464	96.0	+	.00
1891	83	122.1	-22	-26.5	63.40	99.3	-2.88	-4.5	.1478	96.9	+	.00
1892	88	129.4	-27	-30.7	63.41	99.3	-2.89	-4.6	.1506	98.8	+	.00
1893	76	111.8	-15	-19.7	63.87	100.0	-3.35	-5.2	.1504	98.6	+	.00
1894	71	104.4	-10	-14.1	63.46	99.4	-2.94	-4.6	.1496	98.1	+	.00
1895	59	86.8	+ 2	+ 3.1	64.17	100.5	-3.65	-5.7	.1542	101.1	+	.00
1896	63	92.6	- 2	- 3.2	64.57	101.1	-1.05	-1.6	.1527	100.1	+	.00
1897	51	75.6	+10	+19.6	66.12	103.6	-5.00	-8.5	.1533	100.5	+	.00
1898	49	72.1	+12	+24.5	66.37	103.9	-5.85	-8.8	.1523	99.9	+	.00
1899	54	79.4	+ 5	+13.0	69.82	107.7	+ .70	+1.2	.1676	109.9	+	.00
1900	59	86.8	+ 2	+ 3.1	64.88	101.6	-1.36	-2.1	.1625	106.6	+	.00
1901	59	86.8	+ 2	+ 3.1	64.88	101.6	-1.36	-2.1	.1622	106.4	+	.00
1902	62	91.2	- 1	- 1.6	60.32	94.5	+ .20	+ .3	.1656	108.6	+	.00
1903	61	89.7	.....	.....	60.72	94.8	.....	.....	.1683	110.4	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

PAPER AND WOOD PULP—Continued.

CALENDERS, Male.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1892, 1894-1903; 4 establishments, 1893.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (—) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (—) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	55	100.0	+50	+ 90.9	62.24	100.0	- 9.29	-14.9	\$0.1595	100.0	+\$0.0441	+27.6
1890	44	80.0	+61	+138.6	63.75	102.4	-10.80	-16.9	.1502	94.2	+.0534	+35.6
1891	51	92.7	+54	+105.9	63.27	101.7	-10.32	-16.3	.1486	93.2	+.0550	+37.0
1892	55	100.0	+50	+ 90.9	63.05	101.3	-10.10	-16.0	.1479	92.7	+.0557	+37.7
1893	61	110.9	+44	+ 72.1	62.16	99.9	- 9.21	-14.8	.1577	98.9	+.0459	+29.1
1894	55	100.0	+50	+ 90.9	63.05	101.3	-10.10	-16.0	.1551	97.2	+.0485	+31.3
1895	55	100.0	+50	+ 90.9	63.05	101.3	-10.10	-16.0	.1636	102.6	+.0400	+24.4
1896	51	92.7	+54	+105.9	63.27	101.7	-10.32	-16.3	.1647	103.3	+.0389	+23.6
1897	49	89.1	+56	+114.3	63.62	102.2	-10.67	-16.8	.1626	101.9	+.0410	+25.2
1898	66	120.0	+39	+ 69.1	62.74	100.8	- 9.79	-15.6	.1575	98.7	+.0461	+29.3
1899	63	114.5	+42	+ 66.7	64.45	87.5	-11.56	-2.8	.1866	117.0	+.0170	+ 9.1
1900	77	140.0	+28	+ 36.4	64.22	87.1	-11.27	-2.3	.1877	117.7	+.0159	+ 8.5
1901	93	169.1	+12	+ 12.9	63.20	85.5	- 25	- 5	.1954	122.5	+.0082	+ 4.2
1902	95	172.7	+10	+ 10.5	62.61	84.5	+ .34	+ .6	.1961	122.9	+.0075	+ 3.8
1903	105	190.9				85.1			.2036	127.6		

CALENDERS, Female.

[Data from 1 establishment.]

Av. 1890-99.	19	100.0			58.00	100.0	-3.00	-5.2	\$0.1280	100.0	-\$0.0029	- 2.3
1890	20	105.3	-1	- 5.0	58.00	100.0	-3.00	-5.2	.1229	96.0	+.0022	+ 1.8
1891	20	105.3	-1	- 5.0	58.00	100.0	-3.00	-5.2	.1373	107.3	-.0122	- 8.9
1892	24	126.3	-5	-20.8	58.00	100.0	-3.00	-5.2	.1309	102.3	-.0058	- 4.4
1893	24	126.3	-5	-20.8	58.00	100.0	-3.00	-5.2	.1404	109.7	-.0153	-10.9
1894	16	84.2	+3	+18.8	58.00	100.0	-3.00	-5.2	.1198	93.6	+.0053	+ 4.4
1895	20	105.3	-1	- 5.0	58.00	100.0	-3.00	-5.2	.1165	91.0	+.0086	+ 7.8
1896	19	100.0			58.00	100.0	-3.00	-5.2	.1387	108.4	-.0136	- 9.4
1897	18	94.7	+1	+ 5.6	58.00	100.0	-3.00	-5.2	.1228	95.9	+.0023	+ 1.9
1898	18	94.7	+1	+ 5.6	58.00	100.0	-3.00	-5.2	.1208	94.4	+.0043	+ 3.6
1899	13	68.4	+6	+46.2	58.00	100.0	-3.00	-5.2	.1294	101.1	-.0043	- 3.3
1900	15	78.9	+4	+26.7	58.00	100.0	-3.00	-5.2	.1355	105.9	-.0104	- 7.7
1901	15	78.9	+4	+26.7	58.00	100.0	-3.00	-5.2	.1293	101.0	-.0042	- 3.2
1902	16	84.2	+8	+18.8	55.00	94.8			.1271	99.3	-.0020	- 1.6
1903	19	100.0			55.00	94.8			.1251	97.7		

COLOR MIXERS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 2 establishments, 1890-1892, 1894-1903; 1 establishment, 1893.]

Av. 1890-99.	6	100.0	+3	+ 50.0	61.75	100.0	- 9.39	-15.2	\$0.1969	100.0	+\$0.0165	+23.6
1890	5	83.3	+4	+ 80.0	63.43	102.7	-11.07	-17.5	.1776	90.2	+.0658	+37.0
1891	5	83.3	+4	+ 80.0	63.43	102.7	-11.07	-17.5	.1740	90.4	+.0654	+36.7
1892	5	83.3	+4	+ 80.0	63.43	102.7	-11.07	-17.5	.1822	92.5	+.0612	+33.6
1893	4	66.7	+5	+125.0	60.00	97.2	- 7.64	-12.7	.1906	96.8	+.0528	+27.7
1894	5	83.3	+4	+ 80.0	63.43	102.7	-11.07	-17.5	.1958	99.4	+.0476	+24.3
1895	6	100.0	+3	+ 50.0	63.00	102.0	-10.64	-16.9	.1964	99.7	+.0470	+23.9
1896	7	116.7	+2	+ 28.6	62.67	101.5	-10.31	-16.5	.2068	105.0	+.0366	+17.7
1897	7	116.7	+2	+ 28.6	62.67	101.5	-10.31	-16.5	.2068	105.0	+.0366	+17.7
1898	7	116.7	+2	+ 28.6	62.67	101.5	-10.31	-16.5	.2068	105.0	+.0366	+17.7
1899	8	133.3	+1	+ 12.5	62.80	85.5	- .44	- .8	.2290	115.8	+.0154	+ 6.8
1900	9	150.0			62.36	84.8			.2228	113.2	+.0206	+ 9.2
1901	9	150.0			62.36	84.8			.2261	114.8	+.0173	+ 7.7
1902	8	133.3	+1	+ 12.5	62.80	85.5	- .44	- .8	.2236	113.7	+.0196	+ 8.8
1903	9	150.0			62.36	81.8			.2134	123.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 7.]

PAPER AND WOOD PULP—Continued.

MACHINE TENDERS, Male.

[Data for employees from 15 establishments for entire period. Data for hours and wages for establishments, 1890-1892, 1894-1903; 15 establishments, 1893.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (decrease) 1903 as compared with specific	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	
Av. 1890-99.	120	100.0	+43	+35.3	68.15	100.0	-8.22	-12.1	\$0.2250	100.0	+	\$0.007
1890	116	89.9	+56	+48.3	68.54	100.6	-8.61	-12.6	2193	97.1	+	.041
1891	126	97.7	+46	+36.5	68.53	100.6	-8.60	-12.6	2248	99.5	+	.029
1892	126	97.7	+46	+36.5	68.16	100.0	-8.23	-12.1	2260	100.0	+	.034
1893	135	104.7	+37	+27.4	67.87	99.6	-7.94	-11.7	2268	100.4	+	.029
1894	126	97.7	+46	+36.5	68.06	99.9	-8.13	-11.9	2252	99.7	+	.028
1895	131	101.6	+41	+31.3	68.30	100.2	-8.37	-12.3	2244	99.3	+	.029
1896	132	102.3	+40	+30.3	68.33	100.3	-8.40	-12.3	2227	98.6	+	.027
1897	129	100.0	+43	+33.3	68.70	100.8	-8.77	-12.8	2247	99.5	+	.027
1898	131	101.6	+41	+31.3	68.84	101.0	-8.91	-12.9	2259	100.0	+	.029
1899	137	106.2	+35	+25.5	66.13	97.0	-6.20	-9.4	2288	105.7	+	.029
1900	153	118.6	+19	+12.4	66.74	97.9	-6.81	-10.2	2351	104.1	+	.028
1901	160	124.0	+12	+7.5	62.22	91.3	-2.29	-3.7	2522	111.6	+	.012
1902	161	124.8	+11	+6.8	60.59	88.9	-1.66	-1.1	2561	113.4	+	.006
1903	172	133.3			59.93	87.9			2634	116.6		

PRESS TENDERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages for establishments, 1890-1893; 4 establishments, 1894-1903.]

Av. 1890-99.	12	100.0			72.00	100.0			\$0.1170	100.0	+	\$0.007
1890	14	116.7	-2	-11.3	72.00	100.0			1146	97.9	+	.029
1891	14	116.7	-2	-11.3	72.00	100.0			1146	97.9	+	.029
1892	14	116.7	-2	-11.3	72.00	100.0			1146	97.9	+	.029
1893	12	100.0			72.00	100.0			1129	96.5	+	.041
1894	11	91.7	+1	+9.1	72.00	100.0			1187	101.5	+	.028
1895	12	100.0			72.00	100.0			1189	101.6	+	.029
1896	12	100.0			72.00	100.0			1189	101.6	+	.029
1897	12	100.0			72.00	100.0			1189	101.6	+	.029
1898	11	91.7	+1	+9.1	72.00	100.0			1187	101.5	+	.028
1899	12	100.0			72.00	100.0			1189	101.6	+	.029
1900	13	108.3	-1	-7.7	72.00	100.0			1217	104.0	+	.028
1901	13	108.3	-1	-7.7	72.00	100.0			1242	106.2	+	.029
1902	15	125.0	-3	-20.0	72.00	100.0			1243	106.2	+	.029
1903	12	100.0			72.00	100.0			1545	132.1		

PULP GRINDERS, Male.

Data for employees from 3 establishments for entire period. Data for hours and wages for establishments, 1890-1892, 1894-1903; 3 establishments, 1893.]

Av. 1890-99.	31	100.0	-2	-6.5	72.00	100.0			\$0.1236	100.0	+	\$0.019
1890	29	93.5			72.00	100.0			1231	99.8	+	.019
1891	29	93.5			72.00	100.0			1231	99.8	+	.019
1892	29	93.5			72.00	100.0			1231	99.8	+	.019
1893	32	103.2	-3	-9.4	72.00	100.0			1191	96.4	+	.025
1894	32	103.2	-3	-9.4	72.00	100.0			1235	99.9	+	.019
1895	30	96.8	-1	-3.3	72.00	100.0			1240	100.3	+	.018
1896	32	103.2	-3	-9.4	72.00	100.0			1250	101.1	+	.017
1897	30	96.8	-1	-3.3	72.00	100.0			1250	101.1	+	.017
1898	30	96.8	-1	-3.3	72.00	100.0			1250	101.1	+	.017
1899	32	103.2	-3	-9.4	72.00	100.0			1245	100.7	+	.018
1900	32	103.2	-3	-9.4	72.00	100.0			1215	100.7	+	.018
1901	32	103.2	-3	-9.4	72.00	100.0			1255	101.5	+	.018
1902	32	103.2	-3	-9.4	72.00	100.0			1255	101.5	+	.017
1903	29	93.5			72.00	100.0			1028	115.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PAPER AND WOOD PULP—Continued.

RAG SORTERS, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	50	100.0	+17	+34.0	52.26	100.0	+1.65	+3.2	\$0.1724	100.0	+\$0.0065	+3.8
1890	51	102.0	+16	+31.4	51.53	98.6	+2.38	+4.6	.1630	94.5	+.0159	+9.8
1891	45	90.0	+22	+48.9	52.00	99.5	+1.91	+3.7	.1679	97.4	+.0110	+6.6
1892	55	110.0	+12	+21.8	51.27	98.1	+2.64	+5.1	.1721	99.8	+.0068	+4.0
1893	52	104.0	+15	+28.8	51.69	98.9	+2.22	+4.3	.1743	101.1	+.0046	+2.6
1894	46	92.0	+21	+45.7	52.17	99.8	+1.74	+3.3	.1777	103.1	+.0012	+ 7
1895	49	98.0	+18	+36.7	52.16	99.8	+1.75	+3.4	.1766	102.4	+.0023	+1.3
1896	52	104.0	+15	+28.8	52.38	100.2	+1.53	+2.9	.1711	99.2	+.0078	+4.6
1897	59	118.0	+8	+13.6	51.46	98.5	+2.45	+4.8	.1757	101.9	+.0032	+1.8
1898	49	98.0	+18	+36.7	53.98	103.3	-.07	-.1	.1689	98.0	+.0100	+5.9
1899	44	88.0	+23	+52.3	54.00	103.3	-.09	-.2	.1763	102.3	+.0026	+1.5
1900	57	114.0	+10	+17.5	53.47	102.3	+.44	+.8	.1744	101.2	+.0045	+2.6
1901	44	88.0	+23	+52.3	50.27	96.2	+3.64	+7.2	.1778	103.1	+.0011	+.6
1902	55	110.0	+12	+21.8	54.11	103.5	-.20	-3.7	.1742	101.0	+.0047	+2.7
1903	67	134.0			53.91	103.2			.1789	103.8		

RAG SORTERS, Female.

[Data from 5 establishments.]

Av. 1890-99.	156	100.0	+18	+11.5	53.54	100.0	+0.84	+1.6	\$0.0926	100.0	-\$0.0022	-2.4
1890	147	94.2	+27	+18.4	54.20	101.2	+.18	+.3	.0904	97.6		
1891	169	108.3	+5	+3.0	53.49	99.9	+.89	+1.7	.0928	100.2	-.0024	-2.6
1892	171	109.6	+3	+1.8	54.05	101.0	+.33	+.6	.0924	99.8	-.0020	-2.2
1893	176	112.8	-2	-1.1	53.27	99.5	+1.11	+2.1	.0921	99.5	-.0017	-1.8
1894	141	90.4	+33	+23.4	52.78	98.6	+1.60	+3.0	.0947	102.3	-.0043	-4.5
1895	163	104.5	+11	+6.7	53.17	99.3	+1.21	+2.3	.0940	101.6	-.0036	-3.8
1896	169	108.3	+5	+3.0	52.95	98.9	+1.43	+2.7	.0929	100.3	-.0025	-2.7
1897	135	86.5	+39	+28.9	53.61	100.1	+.77	+1.4	.0919	99.2	-.0015	-1.6
1898	135	86.5	+39	+28.9	54.05	101.0	+.33	+.6	.0939	101.4	-.0035	-3.7
1899	157	100.6	+17	+10.8	53.83	100.6	+.55	+1.0	.0904	97.6		
1900	184	117.9	-10	-5.4	53.83	100.5	+.55	+1.0	.0924	99.8	-.0020	-2.2
1901	144	92.3	+30	+20.8	54.95	102.6	-.57	-1.0	.0927	100.1	-.0023	-2.5
1902	136	87.2	+38	+27.9	54.13	101.1	+.25	+.5	.0895	96.7	+.0009	+1.0
1903	174	111.5			54.38	101.6			.0904	97.6		

WOOD COOKERS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890-1893; 2 establishments, 1894-1903.]

Av. 1890-99.	16	100.0	+3	+18.8	61.56	100.0	-7.80	-12.7	\$0.1522	100.0	+\$0.0473	+31.1
1890	12	75.0	+7	+68.3	60.00	97.5	-6.24	-10.4	.1450	95.3	+.0545	+37.6
1891	11	68.8	+8	+72.7	60.00	97.5	-6.24	-10.4	.1442	94.7	+.0553	+38.3
1892	9	56.3	+10	+111.1	60.00	97.5	-6.24	-10.4	.1496	98.3	+.0499	+33.4
1893	7	43.8	+12	+171.4	60.00	97.5	-6.24	-10.4	.1519	99.8	+.0476	+31.3
1894	4	25.0	+15	+375.0	68.00	110.5	-14.24	-20.9	.1487	97.7	+.0508	+34.2
1895	16	100.0	+3	+18.8	64.00	104.0	-10.24	-16.0	.1517	99.7	+.0478	+31.5
1896	16	100.0	+3	+18.8	64.00	104.0	-10.24	-16.0	.1516	99.6	+.0479	+31.6
1897	28	175.0	-9	-32.1	62.67	101.8	-8.91	-14.2	.1464	96.2	+.0531	+36.3
1898	30	187.5	-11	-36.7	62.53	101.6	-8.77	-14.0	.1510	99.2	+.0485	+32.1
1899	22	137.5	-3	-13.6	54.40	88.4	-.64	-1.2	.1816	119.3	+.0179	+9.9
1900	26	162.5	-7	-26.9	53.65	87.2	+.11	+.2	.1862	122.3	+.0133	+7.1
1901	32	200.0	-13	-40.6	52.80	85.8	+.96	+1.8	.1847	121.4	+.0148	+8.0
1902	32	200.0	-13	-40.6	52.80	85.8	+.96	+1.8	.1816	119.3	+.0179	+9.9
1903	19	118.8			53.76	87.3			.1995	131.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71.]

PAPER AND WOOD PULP—Concluded.

WOOD PREPARERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 4 establishments, 1890-1892, 1901-1903; 3 establishments, 1893; 5 establishments, 1894-1900.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	19	100.0	+2	+10.5	66.45	100.0	-3.09	-4.7	\$0.1276	100.0	-\$0.0429	-33.6
1890	12	63.2	+9	+75.0	66.00	99.3	-2.61	-4.0	.1294	101.4	-.0111	-8.5
1891	12	63.2	+9	+75.0	66.00	99.3	-2.61	-4.0	.1284	100.6	-.0421	-33.1
1892	14	73.7	+7	+50.0	66.67	100.3	-3.31	-5.0	.1281	100.4	-.0421	-33.1
1893	19	100.0	+2	+10.5	66.95	100.8	-3.59	-5.4	.1315	103.1	-.0390	-30.4
1894	18	94.7	+3	+16.7	66.82	100.6	-3.46	-5.2	.1247	97.7	-.0458	-35.9
1895	20	105.3	-1	-5.0	66.62	100.3	-3.26	-4.9	.1255	98.4	-.0450	-35.3
1896	25	131.6	-4	-16.0	66.68	100.3	-3.32	-5.0	.1260	98.7	-.0445	-34.9
1897	23	121.1	-2	-8.7	66.55	100.2	-3.19	-4.8	.1261	98.8	-.0444	-34.8
1898	26	136.8	-5	-19.2	66.74	100.4	-3.38	-5.1	.1260	98.7	-.0445	-34.9
1899	23	131.6	-4	-16.0	65.45	98.5	-2.09	-3.2	.1302	102.0	-.0403	-31.1
1900	24	126.3	-3	-12.5	65.23	98.2	-1.87	-2.9	.1325	103.8	-.0380	-29.8
1901	24	126.3	-3	-12.5	64.29	96.7	-.93	-1.4	.1457	114.2	-.0248	-20.2
1902	24	126.3	-3	-12.5	64.29	96.7	-.93	-1.4	.1407	118.1	-.0298	-23.3
1903	21	110.5	.....	.....	63.36	95.3	.....	.....	.1705	133.6	.....	.....

PETROLEUM, REFINING.

BOILER MEN, Male.

[No data, 1890-1893; data from 3 establishments, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	16	(a)	+12	+75.0	80.25	(a)	+1.61	+2.0	\$0.1909	(a)	-\$0.0132	-6.9
1894	20	(a)	+8	+40.0	81.00	(a)	+1.86	+1.1	.1884	(a)	-.0157	-8.2
1895	20	(a)	+8	+40.0	81.00	(a)	+1.86	+1.1	.1884	(a)	-.0157	-8.2
1896	28	(a)	.....	.....	81.86	(a)	.....	.....	.1850	(a)	-.0185	-9.7
1897	28	(a)	.....	.....	81.86	(a)	.....	.....	.1856	(a)	-.0185	-9.7
1898	28	(a)	.....	.....	81.86	(a)	.....	.....	.1856	(a)	-.0185	-9.7
1899	24	(a)	-4	-16.7	81.50	(a)	+1.36	+1.4	.2007	(a)	-.0124	-6.5
1900	24	(a)	-4	-16.7	81.50	(a)	+1.36	+1.4	.2030	(a)	-.0111	-5.5
1901	26	(a)	-2	-7.7	81.69	(a)	+1.17	+1.2	.2047	(a)	-.0096	-4.5
1902	28	(a)	.....	.....	81.86	(a)	.....	.....	.2041	(a)	.....	.....

CAN MAKERS, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	166	(a)	-83	-50.0	60.00	(a)	-6.00	-10.0	\$0.1723	(a)	-\$0.0201	-11.7
1894	111	(a)	-28	-25.2	60.00	(a)	-6.00	-10.0	.1741	(a)	-.0183	-10.6
1895	137	(a)	-51	-48.6	60.00	(a)	-6.00	-10.0	.1727	(a)	-.0197	-11.4
1896	149	(a)	-66	-44.3	60.00	(a)	-6.00	-10.0	.1735	(a)	-.0190	-11.0
1897	128	(a)	-45	-35.9	60.00	(a)	-6.00	-10.0	.1753	(a)	-.0171	-9.8
1898	112	(a)	-29	-25.9	60.00	(a)	-6.00	-10.0	.1751	(a)	-.0173	-10.0
1899	107	(a)	-24	-22.1	54.00	(a)	.....	.....	.1928	(a)	-.0066	-3.8
1900	110	(a)	-25	-24.5	54.00	(a)	.....	.....	.1922	(a)	-.0062	-3.6
1901	101	(a)	-18	-17.8	54.00	(a)	.....	.....	.1928	(a)	-.0066	-3.8
1902	83	(a)	.....	.....	54.00	(a)	.....	.....	.1924	(a)	.....	.....

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PETROLEUM, REFINING—Continued.

COOPERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	17	(a)	- 1	- 6.7	59.20	(a)	-5.20	-8.6	\$0.2563	(a)	+\$0.0559	+9.9
1895	13	(a)	+ 1	+ 7.7	59.08	(a)	-5.08	-8.6	.2573	(a)	+ .0245	+9.5
1896	14	(a)	.....	.....	59.14	(a)	-5.14	-8.7	.2567	(a)	+ .0251	+9.8
1897	6	(a)	+ 8	+133.3	58.00	(a)	-4.00	-6.9	.2657	(a)	+ .0161	+6.1
1898	14	(a)	.....	.....	59.14	(a)	-5.14	-8.7	.2567	(a)	+ .0251	+9.8
1899	11	(a)	+ 3	+ 27.3	58.91	(a)	-4.91	-8.3	.2584	(a)	+ .0232	+9.0
1900	12	(a)	+ 2	+ 16.7	54.00	(a)	.....	.....	.2601	(a)	+ .0017	+ .6
1901	11	(a)	+ 3	+ 27.3	54.00	(a)	.....	.....	.2603	(a)	+ .0015	+ .5
1902	11	(a)	+ 3	+ 27.3	54.00	(a)	.....	.....	.2603	(a)	+ .0015	+ .5
1903	14	(a)	.....	.....	54.00	(a)	.....	.....	.2618	(a)	.....	.....

PACKERS AND LABORERS, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	211	(a)	+26	+12.1	60.00	(a)	-6.00	-10.0	\$0.1829	(a)	+\$0.0075	+4.1
1895	209	(a)	+31	+14.8	60.00	(a)	-6.00	-10.0	.1786	(a)	+ .0118	+6.6
1896	187	(a)	+53	+28.3	60.00	(a)	-6.00	-10.0	.1799	(a)	+ .0105	+5.8
1897	191	(a)	+46	+23.7	60.00	(a)	-6.00	-10.0	.1791	(a)	+ .0113	+6.3
1898	145	(a)	+95	+65.5	60.00	(a)	-6.00	-10.0	.1807	(a)	+ .0097	+5.1
1899	156	(a)	+84	+53.8	60.00	(a)	-6.00	-10.0	.1742	(a)	+ .0162	+9.3
1900	225	(a)	+14	+6.2	54.00	(a)	.....	.....	.1924	(a)	+ .0029	+1.0
1901	260	(a)	+20	+7.7	54.00	(a)	.....	.....	.1919	(a)	+ .0015	+ .8
1902	230	(a)	+10	+4.3	54.00	(a)	.....	.....	.1937	(a)	+ .0033	+1.7
1903	240	(a)	.....	.....	54.00	(a)	.....	.....	.1904	(a)	.....	.....

PIPE FITTERS, Male.

[No data, 1890-1893; data from 3 establishments, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	22	(a)	+57	+259.1	59.73	(a)	-5.73	-9.6	\$0.2263	(a)	+\$0.0110	+4.9
1895	22	(a)	+37	+259.1	59.73	(a)	-5.73	-9.6	.2263	(a)	+ .0110	+4.9
1896	21	(a)	+58	+276.2	59.71	(a)	-5.71	-9.6	.2358	(a)	+ .0015	+ .6
1897	22	(a)	+57	+259.1	59.73	(a)	-5.73	-9.6	.2376	(a)	+ .0003	+ .1
1898	25	(a)	+54	+216.0	59.76	(a)	-5.76	-9.6	.2381	(a)	+ .0008	+ .3
1899	22	(a)	+37	+259.1	59.73	(a)	-5.73	-9.6	.2351	(a)	+ .0042	+1.8
1900	20	(a)	+39	+295.0	54.00	(a)	.....	.....	.2310	(a)	+ .0141	+5.6
1901	54	(a)	+25	+46.8	54.00	(a)	.....	.....	.2332	(a)	+ .0041	+1.8
1902	62	(a)	+17	+27.4	54.00	(a)	.....	.....	.2433	(a)	+ .0061	+2.5
1903	79	(a)	.....	.....	54.00	(a)	.....	.....	.2377	(a)	.....	.....

a Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—(continued.)

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

PETROLEUM, REFINING—Concluded.

PUMP MEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	9	(a)	+9	+100.0	79.89	(a)	+1.28	+1.6	\$0.1869	(a)	+80.072	+
1895	11	(a)	+7	+63.6	80.64	(a)	+ .53	+ .7	.1832	(a)	+ .0389	+
1896	11	(a)	+7	+63.6	80.64	(a)	+ .53	+ .7	.1886	(a)	+ .0750	+
1897	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .0725	+
1898	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .0725	+
1899	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .0725	+
1900	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.2036	(a)	+ .0907	+
1901	16	(a)	+2	+12.5	80.81	(a)	+ .36	+ .4	.2072	(a)	+ .0925	+
1902	16	(a)	+2	+12.5	80.81	(a)	+ .36	+ .4	.2091	(a)	+ .0956	+
1903	18	(a)	.....	.....	81.17	(a)	.....	.....	.2141	(a)	.....	.....

STILL FIREMEN, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	10	(a)	.....	.....	84.00	(a)	.....	.....	\$0.1783	(a)	+80.0175	+
1895	10	(a)	.....	.....	84.00	(a)	.....	.....	.1783	(a)	+ .0175	+
1896	10	(a)	.....	.....	84.00	(a)	.....	.....	.1783	(a)	+ .0175	+
1897	10	(a)	.....	.....	84.00	(a)	.....	.....	.1783	(a)	+ .0175	+
1898	16	(a)	.....	.....	84.00	(a)	.....	.....	.1783	(a)	+ .0175	+
1899	16	(a)	.....	.....	84.00	(a)	.....	.....	.1783	(a)	+ .0175	+
1900	10	(a)	.....	.....	84.00	(a)	.....	.....	.1958	(a)	.....	.....
1901	10	(a)	.....	.....	84.00	(a)	.....	.....	.1958	(a)	.....	.....
1902	10	(a)	.....	.....	84.00	(a)	.....	.....	.1958	(a)	.....	.....
1903	10	(a)	.....	.....	84.00	(a)	.....	.....	.1958	(a)	.....	.....

STILL MEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	20	(a)	+6	+30.0	84.00	(a)	.....	.....	\$0.2095	(a)	+80.0327	+
1895	20	(a)	+6	+30.0	84.00	(a)	.....	.....	.2095	(a)	+ .0327	+
1896	20	(a)	+6	+30.0	84.00	(a)	.....	.....	.2095	(a)	+ .0327	+
1897	26	(a)	.....	.....	84.00	(a)	.....	.....	.2157	(a)	+ .0365	+
1898	26	(a)	.....	.....	84.00	(a)	.....	.....	.2157	(a)	+ .0365	+
1899	26	(a)	.....	.....	84.00	(a)	.....	.....	.2157	(a)	+ .0365	+
1900	24	(a)	+2	+8.3	84.00	(a)	.....	.....	.2390	(a)	+ .0932	+
1901	24	(a)	+2	+8.3	84.00	(a)	.....	.....	.2390	(a)	+ .0932	+
1902	24	(a)	+2	+8.3	84.00	(a)	.....	.....	.2390	(a)	+ .0932	+
1903	26	(a)	.....	.....	84.00	(a)	.....	.....	.2422	(a)	.....	.....

a Not computed, as data reported do not cover entire base period.

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PLANING MILL.

CARPENTERS, Male.

[Data from 65 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	769	100.0	+276	+35.9	57.15	100.0	-1.98	-3.5	\$0.2349	100.0	+\$0.0453	+19.3
1890	725	94.7	+317	+41.5	58.26	101.9	-3.09	-5.3	.2318	98.7	+.0444	+20.9
1891	725	94.3	+320	+44.1	57.77	101.1	-2.60	-4.5	.2348	100.0	+.0454	+19.3
1892	771	100.3	+274	+35.6	57.92	101.3	-2.75	-4.7	.2330	99.2	+.0472	+20.3
1893	759	98.7	+286	+37.7	57.27	100.2	-2.10	-3.7	.2354	100.2	+.0448	+19.0
1894	708	92.1	+337	+47.6	57.23	100.1	-2.06	-3.6	.2272	96.7	+.0530	+23.3
1895	713	92.7	+332	+46.6	57.03	99.8	-1.86	-3.3	.2303	98.0	+.0499	+21.7
1896	805	104.7	+240	+31.4	56.03	98.0	-1.86	-1.5	.2368	100.8	+.0434	+18.3
1897	782	101.7	+263	+33.6	56.63	99.1	-1.46	-2.6	.2375	101.1	+.0427	+18.0
1898	795	103.4	+250	+31.4	56.82	99.4	-1.65	-2.9	.2404	102.3	+.0398	+16.6
1899	899	116.9	+146	+16.2	56.57	99.0	-1.40	-2.5	.2414	102.8	+.0388	+15.1
1900	942	122.5	+103	+10.9	56.23	98.4	-1.06	-1.9	.2507	106.7	+.0285	+11.8
1901	999	129.9	+46	+4.6	56.10	98.2	-.93	-1.7	.2537	108.0	+.0265	+10.4
1902	1,021	132.8	+24	+2.4	55.44	97.0	-.27	-.5	.2669	113.6	+.0133	+5.0
1903	1,045	135.9			55.17	96.5			.2802	119.3		

FRAMERS, Male.

[Data from 26 establishments.]

Av. 1890-99.	188	100.0	+44	+23.4	58.91	100.0	-1.26	-2.1	\$0.2043	100.0	+\$0.0291	+14.2
1890	164	87.2	+68	+41.5	59.23	100.5	-1.58	-2.7	.2049	100.3	+.0285	+13.9
1891	171	91.0	+61	+35.7	58.91	100.0	-1.26	-2.1	.2073	101.5	+.0261	+12.6
1892	181	96.3	+51	+28.2	58.90	100.0	-1.25	-2.1	.2104	103.0	+.0230	+10.9
1893	179	95.2	+53	+29.6	58.82	99.8	-1.17	-2.0	.2091	102.3	+.0243	+11.6
1894	169	89.9	+63	+37.3	59.22	100.5	-1.57	-2.7	.2004	98.1	+.0330	+16.5
1895	199	105.9	+33	+16.6	58.77	99.8	-1.12	-1.9	.1961	97.0	+.0353	+17.8
1896	193	102.7	+39	+20.2	59.05	100.2	-1.40	-2.4	.1959	95.9	+.0375	+19.1
1897	199	105.9	+33	+16.6	59.05	100.2	-1.40	-2.4	.1993	97.6	+.0341	+17.1
1898	208	110.6	+24	+11.5	58.90	100.0	-1.25	-2.1	.2048	100.2	+.0286	+14.0
1899	213	113.3	+19	+8.9	58.26	98.9	-.61	-1.0	.2125	104.0	+.0209	+9.8
1900	209	111.2	+23	+11.0	58.45	99.2	-.80	-1.4	.2150	105.2	+.0184	+8.6
1901	224	119.1	+8	+3.6	58.06	98.6	-.41	-.7	.2218	108.6	+.0116	+5.2
1902	217	115.4	+15	+6.9	57.65	97.9			.2274	111.3	+.0060	+2.6
1903	232	123.4			57.65	97.9			.2334	114.2		

GLAZIERS, Male.

[Data from 6 establishments.]

Av. 1890-99.	11	100.0	+17	+154.5	59.49	100.0	-0.56	-0.9	\$0.1939	100.0	+\$0.0135	+7.0
1890	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1856	95.7	+.0219	+11.8
1891	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1920	99.0	+.0154	+8.0
1892	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1948	100.5	+.0126	+6.5
1893	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.2031	101.7	+.0043	+2.1
1894	10	90.9	+18	+180.0	59.20	99.5	-.27	-.5	.1993	102.8	+.0081	+4.1
1895	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1953	97.7	+.0179	+9.4
1896	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1876	96.8	+.0198	+10.6
1897	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1953	100.7	+.0121	+6.2
1898	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1935	99.8	+.0139	+7.2
1899	15	136.4	+13	+86.7	59.47	100.0	-.54	-.9	.1985	102.4	+.0089	+4.5
1900	16	145.5	+12	+75.0	58.50	98.3	+.43	+.7	.2069	106.7	+.0005	+
1901	20	181.8	+8	+40.0	58.50	98.3	+.43	+.7	.2050	105.7	+.0024	+1.2
1902	22	200.0	+6	+27.3	58.64	98.6	+.29	+.5	.1999	103.1	+.0075	+3.8
1903	25	251.6			58.93	99.1			.2074	107.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

PETROLEUM, REFINING—Concluded.

PUMP MEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	9	(a)	+5	+100.0	79.89	(a)	+1.28	+1.6	80.1869	(a)	+\$0.0072	-
1895	11	(a)	+7	+63.6	80.64	(a)	+ .53	+ .7	.1832	(a)	+ .0309	-
1896	11	(a)	+7	+63.6	80.64	(a)	+ .53	+ .7	.1886	(a)	+ .025	-
1897	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .022	-
1898	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .022	-
1899	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.1849	(a)	+ .022	-
1900	16	(a)	+2	+12.5	81.25	(a)	— .08	— .1	.2036	(a)	+ .0105	-
1901	16	(a)	+2	+12.5	80.81	(a)	+ .36	+ .4	.2072	(a)	+ .0069	-
1902	16	(a)	+2	+12.5	80.81	(a)	+ .36	+ .4	.2091	(a)	+ .0069	-
1903	18	(a)			81.17	(a)			.2141	(a)		

STILL FIREMEN, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	10	(a)			84.00	(a)			80.1783	(a)	+\$0.0175	-
1895	10	(a)			84.00	(a)			.1783	(a)	+ .0175	-
1896	10	(a)			84.00	(a)			.1783	(a)	+ .0175	-
1897	10	(a)			84.00	(a)			.1783	(a)	+ .0175	-
1898	16	(a)			84.00	(a)			.1783	(a)	+ .0175	-
1899	16	(a)			84.00	(a)			.1783	(a)	+ .0175	-
1900	16	(a)			84.00	(a)			.1958	(a)		
1901	10	(a)			84.00	(a)			.1958	(a)		
1902	10	(a)			84.00	(a)			.1958	(a)		
1903	10	(a)			84.00	(a)			.1958	(a)		

STILL MEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	20	(a)	+6	+30.0	84.00	(a)			80.2095	(a)	+\$0.0027	-
1895	20	(a)	+6	+30.0	84.00	(a)			.2095	(a)	+ .0027	-
1896	20	(a)	+6	+30.0	84.00	(a)			.2085	(a)	+ .0027	-
1897	26	(a)			84.00	(a)			.2157	(a)	+ .0265	-
1898	26	(a)			84.00	(a)			.2157	(a)	+ .0265	-
1899	26	(a)			84.00	(a)			.2157	(a)	+ .0265	-
1900	24	(a)	+2	+8.3	84.00	(a)			.2390	(a)	+ .0032	-
1901	24	(a)	+2	+8.3	84.00	(a)			.2390	(a)	+ .0032	-
1902	24	(a)	+2	+8.3	84.00	(a)			.2390	(a)	+ .0032	-
1903	26	(a)			84.00	(a)			.2422	(a)		

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PLANING MILL.

CARPENTERS, Male.

[Data from 65 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	769	100.0	+276	+35.9	57.15	100.0	-1.98	-3.5	\$0.2349	100.0	+\$0.0453	+19.3
1890	728	94.7	+317	+43.5	58.26	101.9	-3.09	-5.3	.2318	98.7	+.0484	+20.9
1891	725	94.3	+320	+44.1	57.77	101.1	-2.60	-4.5	.2348	100.0	+.0454	+19.3
1892	771	100.3	+274	+35.6	57.92	101.3	-2.75	-4.7	.2330	99.2	+.0472	+20.3
1893	759	98.7	+286	+37.7	57.27	100.2	-2.10	-3.7	.2354	100.2	+.0448	+19.0
1894	708	92.1	+337	+47.6	57.23	100.1	-2.06	-3.6	.2272	96.7	+.0530	+23.3
1895	713	92.7	+332	+46.6	57.03	99.8	-1.86	-3.3	.2303	98.0	+.0499	+21.7
1896	805	104.7	+240	+29.8	56.03	98.0	-1.86	-1.5	.2368	100.8	+.0434	+18.3
1897	782	101.7	+263	+33.6	56.63	99.1	-1.46	-2.6	.2375	101.1	+.0427	+18.0
1898	795	103.4	+250	+31.4	56.82	99.4	-1.65	-2.9	.2404	102.3	+.0398	+16.6
1899	899	116.9	+146	+16.2	56.57	99.0	-1.40	-2.5	.2414	102.8	+.0388	+16.1
1900	942	122.5	+103	+10.9	56.23	98.4	-1.06	-1.9	.2507	106.7	+.0295	+11.8
1901	929	122.9	+46	+4.6	56.10	98.2	-.93	-1.7	.2537	108.0	+.0265	+10.4
1902	1,021	132.8	+24	+2.4	55.44	97.0	-.27	-.5	.2669	113.6	+.0133	+5.0
1903	1,015	135.9	.....	.....	55.17	96.5	.....	.....	.2802	119.3	.....	.....

FRAMERS, Male.

[Data from 26 establishments.]

Av. 1890-99.	188	100.0	+44	+23.4	58.31	100.0	-1.26	-2.1	\$0.2043	100.0	+\$0.0291	+14.2
1890	164	87.2	+68	+41.5	59.23	100.5	-1.68	-2.7	.2049	100.3	+.0285	+13.9
1891	171	91.0	+61	+35.7	58.91	100.0	-1.26	-2.1	.2073	101.5	+.0261	+12.6
1892	181	96.3	+51	+28.2	58.90	100.0	-1.25	-2.1	.2104	103.0	+.0230	+10.9
1893	179	95.2	+53	+29.6	58.82	99.8	-1.17	-2.0	.2091	102.3	+.0243	+11.6
1894	169	89.9	+63	+37.3	59.22	100.5	-1.57	-2.7	.2004	98.1	+.0330	+16.5
1895	199	105.9	+33	+16.6	58.77	99.8	-1.12	-1.9	.1981	97.0	+.0353	+17.8
1896	193	102.7	+39	+20.2	59.05	100.2	-1.40	-2.4	.1969	95.9	+.0375	+19.1
1897	199	105.9	+33	+16.6	59.05	100.2	-1.40	-2.4	.1993	97.6	+.0341	+17.1
1898	206	110.6	+24	+11.5	58.90	100.0	-1.25	-2.1	.2048	100.2	+.0286	+14.0
1899	213	113.3	+19	+8.9	58.26	98.9	-.61	-1.0	.2125	104.0	+.0209	+9.8
1900	209	111.2	+23	+11.0	58.45	99.2	-.80	-1.4	.2150	105.2	+.0184	+8.6
1901	224	119.1	+8	+3.6	58.06	98.6	-.41	-.7	.2218	108.6	+.0116	+5.2
1902	217	115.4	+15	+6.9	57.65	97.9	.....	.....	.2274	111.3	+.0060	+2.6
1903	232	123.4	.....	.....	57.65	97.9	.....	.....	.2334	114.2	.....	.....

GLAZIERS, Male.

[Data from 6 establishments.]

Av. 1890-99.	11	100.0	+17	+154.5	59.49	100.0	-0.56	-0.9	\$0.1939	100.0	+\$0.0135	+7.0
1890	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1855	95.7	+.0219	+11.8
1891	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1920	99.0	+.0154	+8.0
1892	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.1948	100.5	+.0126	+6.5
1893	9	81.8	+19	+211.1	59.78	100.5	-.85	-1.4	.2031	104.7	+.0043	+2.1
1894	10	90.9	+18	+180.0	59.20	99.5	-.27	-.5	.1993	102.8	+.0081	+4.1
1895	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1895	97.7	+.0179	+9.4
1896	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1876	96.8	+.0198	+10.6
1897	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1953	100.7	+.0121	+6.2
1898	11	100.0	+17	+154.5	59.27	99.6	-.34	-.6	.1935	99.8	+.0139	+7.2
1899	15	136.4	+13	+86.7	59.47	100.0	-.54	-.9	.1985	102.4	+.0089	+4.6
1900	16	145.5	+12	+75.0	58.50	98.3	+.43	+.7	.2069	106.7	+.0005	+.2
1901	20	181.8	+8	+40.0	58.50	98.3	+.43	+.7	.2050	105.7	+.0024	+1.2
1902	22	200.0	+6	+27.3	58.64	98.6	+.29	+.5	.1999	103.1	+.0075	+3.8
1903	28	254.5	.....	.....	58.93	99.1	.....	.....	.2074	107.0	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PLANING MILL—Continued.

LABORERS, Male.

[Data from 13 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	256	100.0	+49	+15.6	59.61	100.0	-0.06	-0.1	\$0.1103	100.0	+\$0.0147	+13.3
1890	229	85.9	+76	+34.5	59.66	100.1	- .10	- .2	.1129	102.4	+ .0121	+10.7
1891	230	89.8	+66	+28.7	59.67	100.1	- .11	- .2	.1162	105.3	+ .0088	+ 7.6
1892	227	88.7	+69	+30.4	59.65	100.1	- .09	- .2	.1120	101.5	+ .0130	+11.6
1893	223	87.1	+73	+32.7	59.54	99.9	+ .02	+ .03	.1084	98.3	+ .0166	+15.5
1894	240	93.8	+56	+23.3	59.59	100.0	- .03	- .1	.1038	94.1	+ .0212	+20.4
1895	261	102.0	+35	+13.4	59.61	100.0	- .05	- .1	.1058	95.9	+ .0192	+18.1
1896	269	105.1	+27	+10.0	59.49	99.8	+ .07	+ .1	.1064	96.5	+ .0186	+17.5
1897	265	103.5	+31	+11.7	59.55	99.9	+ .01	+ .02	.1059	96.0	+ .0191	+18.0
1898	274	107.0	+22	+ 8.0	59.63	100.0	- .07	- .1	.1120	101.5	+ .0130	+11.6
1899	348	135.9	-52	-14.9	59.73	100.2	- .17	- .3	.1197	108.5	+ .0053	+ 4.4
1900	282	110.2	+14	+ 5.0	59.54	99.9	+ .02	+ .03	.1134	102.8	+ .0116	+10.2
1901	344	134.4	-18	-14.0	59.61	100.0	- .05	- .1	.1222	110.8	+ .0028	+ 2.2
1902	327	127.7	-31	- 9.5	59.60	100.0	- .01	- .01	.1222	110.8	+ .0028	+ 2.2
1903	296	115.6			59.56	99.9			.1250	113.3		

MACHINE WOODWORKERS, Male.

[Data from 92 establishments.]

Av. 1890-99.	965	100.0	+214	+22.2	58.82	100.0	-1.95	-3.3	\$0.2071	100.0	+\$0.0339	+16.4
1890	939	97.3	+240	+25.6	59.53	101.2	-2.66	-4.5	.2038	98.4	+ .0372	+18.3
1891	940	97.4	+239	+25.4	59.20	100.6	-2.33	-3.9	.2054	99.2	+ .0356	+17.3
1892	950	98.4	+229	+24.1	59.16	100.6	-2.29	-3.9	.2065	99.7	+ .0345	+16.7
1893	945	97.9	+234	+24.8	58.90	100.1	-2.03	-3.4	.2063	99.6	+ .0347	+16.8
1894	926	96.0	+233	+24.3	59.05	100.4	-2.18	-3.7	.2017	97.4	+ .0393	+19.5
1895	941	97.8	+235	+24.9	58.59	99.6	-1.72	-2.9	.2047	98.8	+ .0367	+17.7
1896	963	99.8	+216	+22.4	58.44	99.4	-1.57	-2.7	.2065	99.7	+ .0345	+16.7
1897	983	101.9	+190	+19.9	58.66	99.7	-1.79	-3.1	.2091	101.0	+ .0319	+15.3
1898	1,021	105.8	+158	+15.5	58.37	99.2	-1.50	-2.6	.2113	102.0	+ .0297	+14.1
1899	1,035	107.3	+144	+13.9	58.26	99.0	-1.39	-2.4	.2153	104.0	+ .0257	+11.9
1900	1,075	111.4	+104	+ 9.7	58.19	98.9	-1.32	-2.3	.2208	106.6	+ .0202	+ 9.1
1901	1,097	113.7	+ 82	+ 7.5	58.04	98.7	-1.17	-2.0	.2251	108.7	+ .0159	+ 7.1
1902	1,166	120.8	+ 13	+ 1.1	57.24	97.3	- .37	- .6	.2341	113.0	+ .0069	+ 2.9
1903	1,179	122.2			57.87	96.7			.2410	116.4		

SAWYERS, BAND, Male.

[Data from 31 establishments.]

Av. 1890-99.	49	100.0	+11	+22.4	58.31	100.0	-0.29	-0.5	\$0.2143	100.0	+\$0.0223	+10.4
1890	47	95.9	+13	+27.7	59.30	101.7	-1.28	-2.2	.2156	100.7	+ .0210	+ 9.7
1891	47	95.9	+13	+27.7	58.40	100.2	- .38	- .7	.2176	101.5	+ .0190	+ 8.7
1892	48	98.0	+12	+25.0	58.31	100.0	- .29	- .5	.2162	100.9	+ .0204	+ 9.4
1893	47	95.9	+13	+27.7	58.40	100.2	- .38	- .7	.2142	100.0	+ .0224	+10.5
1894	47	95.9	+13	+27.7	59.17	101.5	-1.15	-1.9	.2092	97.6	+ .0274	+13.1
1895	47	95.9	+13	+27.7	57.38	98.4	+ .64	+1.1	.2127	99.3	+ .0239	+11.2
1896	50	102.0	+10	+20.0	58.22	99.8	- .20	- .3	.2114	98.6	+ .0252	+11.9
1897	51	104.1	+ 9	+17.6	58.10	99.6	- .08	- .1	.2140	99.9	+ .0236	+10.6
1898	52	106.1	+ 8	+15.4	58.02	99.5			.2155	100.6	+ .0211	+ 9.4
1899	52	106.1	+ 8	+15.4	57.83	99.2	+ .19	+ .3	.2169	101.2	+ .0197	+ 9.1
1900	51	110.2	+ 6	+11.1	58.59	100.5	- .57	- 1.0	.2189	102.1	+ .0177	+ 8.1
1901	55	112.2	+ 5	+ 9.1	58.58	100.5	- .56	- 1.0	.2221	103.6	+ .0145	+ 6.5
1902	57	116.3	+ 3	+ 5.3	58.12	99.7	- .10	- .2	.2255	106.6	+ .0081	+ 3.8
1903	60	122.4			58.02	99.5			.2366	110.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PLANING MILL—Concluded.

SAWYERS, CIRCULAR, Male.

[Data from 45 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	178	100.0	+66	+37.1	58.54	100.0	-0.99	-1.7	\$0.2015	100.0	+\$0.0284	+14.1
1890	164	92.1	+80	+44.8	59.03	100.8	-1.48	-2.5	.2020	100.2	+.0279	+13.8
1891	167	93.8	+77	+43.1	58.80	100.4	-1.25	-2.1	.2025	100.5	+.0274	+13.5
1892	166	93.3	+78	+47.0	58.76	100.4	-1.21	-2.1	.2023	100.4	+.0276	+13.6
1893	167	93.8	+77	+46.1	58.59	100.1	-1.04	-1.8	.2040	101.2	+.0259	+12.7
1894	175	98.3	+69	+39.4	58.83	100.5	-1.28	-2.2	.1991	98.8	+.0308	+15.5
1895	175	98.3	+69	+39.4	58.27	99.5	-.72	-1.2	.1990	98.8	+.0309	+15.5
1896	181	101.7	+63	+34.8	58.04	99.1	-.49	-.8	.1976	98.1	+.0323	+16.3
1897	183	102.8	+61	+33.3	58.51	99.9	-.95	-1.6	.1985	98.5	+.0314	+15.8
1898	199	111.8	+45	+22.6	58.30	99.6	-.75	-1.3	.2009	99.7	+.0290	+14.4
1899	207	116.3	+37	+17.9	58.24	99.5	-.69	-1.2	.2087	103.6	+.0212	+10.2
1900	215	120.8	+29	+13.5	58.23	99.5	-.68	-1.2	.2115	105.0	+.0184	+8.7
1901	229	128.7	+15	+6.6	58.04	99.1	-.49	-.8	.2186	108.5	+.0113	+5.2
1902	234	131.5	+10	+4.3	57.97	99.0	-.42	-.7	.2223	110.8	+.0066	+3.0
1903	244	137.1			57.55	98.3			.2299	114.1		

SAWYERS, JIG, Male.

[Data from 19 establishments.]

Av. 1890-99.	26	100.0	+2	+7.7	57.94	100.0	-0.12	-0.2	\$0.2044	100.0	+\$0.0204	+10.0
1890	26	100.0	+2	+7.7	59.46	102.6	-1.64	-2.8	.2008	98.2	+.0240	+12.0
1891	26	100.0	+2	+7.7	58.08	100.2	-.26	-.4	.2058	100.4	+.0195	+9.5
1892	26	100.0	+2	+7.7	58.08	100.2	-.26	-.4	.2047	100.1	+.0201	+9.8
1893	27	103.8	+1	+3.7	57.93	100.0	-.11	-.2	.2034	99.5	+.0214	+10.1
1894	27	103.8	+1	+3.7	59.26	102.3	-1.44	-2.4	.1988	97.3	+.0360	+13.5
1895	27	103.8	+1	+3.7	56.15	96.9	+1.67	+3.0	.2065	101.0	+.0183	+8.9
1896	26	100.0	+2	+7.7	57.85	99.8	-.03	-.1	.2009	98.3	+.0239	+11.9
1897	26	100.0	+2	+7.7	57.62	99.4	+.20	+.3	.2037	99.7	+.0211	+10.4
1898	26	100.0	+2	+7.7	57.62	99.4	+.20	+.3	.2063	100.9	+.0185	+9.0
1899	27	103.8	+1	+3.7	57.33	98.9	+.49	+.9	.2135	104.5	+.0113	+5.3
1900	28	107.7			58.75	101.4	-.93	-1.6	.2119	103.7	+.0129	+6.1
1901	28	107.7			58.86	101.6	-1.04	-1.8	.2168	106.1	+.0080	+3.7
1902	27	103.8	+1	+3.7	58.19	100.4	-.37	-.6	.2205	107.9	+.0043	+2.0
1903	28	107.7			57.82	99.8			.2248	110.0		

SAWYERS, NOT SPECIFIED, Male.

[Data from 17 establishments.]

Av. 1890-99.	30	100.0			57.64	100.0	-3.51	-6.1	\$0.2052	100.0	+\$0.0367	+17.9
1890	29	96.7	+1	+3.4	58.38	101.3	-4.25	-7.3	.2032	99.0	+.0387	+19.0
1891	29	96.7	+1	+3.4	58.17	100.9	-4.04	-6.9	.2042	99.6	+.0377	+18.5
1892	31	103.8	+1	+3.4	58.29	101.1	-4.16	-7.1	.2052	100.5	+.0387	+19.2
1893	30	100.0			57.83	100.3	-3.70	-6.4	.2069	100.8	+.0350	+16.9
1894	29	96.7	+1	+3.4	58.00	100.6	-3.57	-6.7	.1973	96.2	+.0446	+22.6
1895	29	96.7	+1	+3.4	57.86	100.4	-3.73	-6.5	.1998	97.4	+.0420	+21.0
1896	29	96.7	+1	+3.4	56.30	98.7	-2.77	-4.9	.2067	100.7	+.0352	+17.0
1897	30	100.0			57.37	99.5	-3.24	-5.6	.2069	100.8	+.0350	+16.9
1898	29	96.7	+1	+3.4	56.86	98.6	-2.73	-4.8	.2073	101.0	+.0346	+16.7
1899	31	103.8	+1	+3.4	56.74	98.4	-2.61	-4.6	.2118	103.2	+.0301	+14.2
1900	30	100.0			56.23	97.6	-2.10	-3.7	.2161	105.3	+.0256	+11.9
1901	30	100.0			55.50	96.3	-1.37	-2.5	.2275	119.9	+.0144	+6.3
1902	31	103.8	+1	+3.4	53.94	93.6	+.19	+.4	.2467	120.2	+.0048	+1.9
1903	30	100.0			51.13	93.9			.2419	117.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

POTTERY.

DIPPERS, Male.

[Data from 4 establishments.]

Year.	Num-ber.	Employees.			Hours per week.				Wages per hour.			
		Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	5	100.0	-1	-20.0	44.88	100.0	+0.87	+1.9	\$0.4665	100.0	+\$0.0632	+13.5
1890	5	100.0	-1	-20.0	43.80	97.6	+1.95	+4.7	.4435	95.1	+.0662	+19.4
1891	5	100.0	-1	-20.0	43.80	97.6	+1.95	+4.5	.4435	95.1	+.0662	+19.4
1892	5	100.0	-1	-20.0	43.80	97.6	+1.95	+4.5	.4492	96.3	+.0805	+17.5
1893	5	100.0	-1	-20.0	43.80	97.6	+1.95	+4.7	.4956	106.2	+.0341	+ 6.9
1894	5	100.0	-1	-20.0	43.80	97.6	+1.95	+4.6	.4841	103.7	+.0456	+ 9.4
1895	4	80.0			44.75	99.7	+1.00	+2.2	.4545	97.4	+.0752	+16.5
1896	4	80.0			44.75	99.7	+1.00	+2.2	.4146	88.9	+.1151	+27.4
1897	4	80.0			46.75	104.2	-1.00	-2.1	.4893	104.9	+.0404	+ 8.3
1898	4	80.0			46.75	104.2	-1.00	-2.1	.4893	104.9	+.0404	+ 8.3
1899	4	80.0			46.75	104.2	-1.00	-2.1	.5010	107.4	+.0287	+ 5.7
1900	4	80.0			44.75	99.7	+1.00	+2.2	.4717	101.1	+.0580	+12.5
1901	4	80.0			45.75	101.9			.5112	109.6	+.0185	+ 3.6
1902	4	80.0			45.75	101.9			.5112	109.6	+.0185	+ 3.6
1903	4	80.0			45.75	101.9			.5297	113.5		

JIGGER MEN, Male.

[Data from 3 establishments.]

Av. 1890-99.	14	100.0	+1	+7.1	54.55	100.0	-2.15	-3.9	\$0.3531	100.0	+\$0.0465	+13.2
1890	15	107.1			54.40	99.7	-2.00	-3.7	.3556	100.7	+.0420	+11.8
1891	15	107.1			54.40	99.7	-2.00	-3.7	.3572	101.2	+.0424	+11.9
1892	13	92.9	+2	+15.4	54.62	100.1	-2.22	-4.1	.3455	97.8	+.0541	+15.7
1893	17	121.4	-2	-6.8	54.24	99.4	-1.84	-3.4	.3696	104.7	+.0300	+ 8.1
1894	16	114.3	-1	-6.3	54.31	99.6	-1.91	-3.5	.3496	99.0	+.0500	+14.5
1895	11	78.6	+4	+36.4	54.91	100.7	-2.51	-4.6	.3304	93.6	+.0692	+30.9
1896	14	100.0	+1	+7.1	54.50	99.9	-2.10	-3.9	.3427	97.1	+.0569	+16.6
1897	12	85.7	+3	+25.0	54.75	100.4	-2.35	-4.3	.3257	92.2	+.0739	+22.7
1898	13	92.9	+2	+15.4	54.62	100.1	-2.22	-4.1	.3605	102.1	+.0521	+13.6
1899	12	85.7	+3	+25.0	54.75	100.4	-2.35	-4.3	.3939	111.6	+.0057	+ 1.4
1900	12	85.7	+3	+25.0	55.33	101.4	-2.35	-4.3	.3599	101.9	+.0397	+11.0
1901	12	85.7	+3	+25.0	54.75	100.4	-2.35	-4.3	.3843	108.8	+.0153	+ 4.0
1902	12	85.7	+3	+25.0	54.75	100.4	-2.35	-4.3	.3915	110.9	+.0081	+ 2.1
1903	15	107.1			52.40	96.1			.3996	113.2		

KILN FIREMEN, Male.

[Data from 3 establishments.]

Av. 1890-99.	3	100.0			60.00	100.0			\$0.2944	100.0	+\$0.0306	+10.4
1890	3	100.0			60.00	100.0			.2694	91.5	+.0556	+20.6
1891	3	100.0			60.00	100.0			.2694	91.5	+.0556	+20.6
1892	3	100.0			60.00	100.0			.2972	101.0	+.0278	+ 9.4
1893	3	100.0			60.00	100.0			.2972	101.0	+.0278	+ 9.4
1894	3	100.0			60.00	100.0			.2972	101.0	+.0278	+ 9.4
1895	3	100.0			60.00	100.0			.2806	95.3	+.0444	+15.8
1896	3	100.0			60.00	100.0			.2906	95.3	+.0444	+15.8
1897	3	100.0			60.00	100.0			.3361	114.2	-.0111	- 3.3
1898	3	100.0			60.00	100.0			.3361	114.2	-.0111	- 3.3
1899	3	100.0			60.00	100.0			.2906	95.3	+.0444	+15.8
1900	3	100.0			60.00	100.0			.2906	95.3	+.0444	+15.8
1901	3	100.0			60.00	100.0			.2906	95.3	+.0444	+15.8
1902	3	100.0			60.00	100.0			.3043	104.7	+.0167	+ 5.4
1903	3	100.0			60.00	100.0			.3250	110.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

POTTERY—Continued.

KILN MEN, Male.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	44	100.0	+1	+ 2.3	49.89	100.0	+0.44	+0.9	\$0.2874	100.0	-\$0.0045	-1.6
1890	41	93.2	+4	+ 9.8	49.78	99.8	+ .55	+1.1	.2912	101.3	— .0083	-2.9
1891	46	104.5	-1	- 2.2	49.48	99.2	+ .85	+1.7	.2994	104.2	— .0165	-5.5
1892	45	102.3	.....	.....	49.53	99.3	+ .80	+1.6	.2984	103.8	— .0155	-5.2
1893	45	102.3	.....	.....	49.53	99.3	+ .80	+1.6	.2990	104.0	— .0161	-5.4
1894	45	102.3	.....	.....	49.53	99.3	+ .80	+1.6	.2916	101.5	— .0087	-3.0
1895	44	100.0	+1	+ 2.3	49.59	99.4	+ .74	+1.5	.2936	102.2	— .0107	-3.6
1896	39	88.6	+6	+15.4	50.54	101.3	- .21	- .4	.2701	94.0	+ .0128	+4.7
1897	43	97.7	+2	+ 4.7	50.21	100.6	+ .12	+ .2	.2765	96.2	+ .0064	+2.3
1898	42	95.5	+3	+ 7.1	50.29	100.8	+ .04	+ .1	.2748	95.6	+ .0081	+2.9
1899	47	106.8	-2	- 4.3	50.45	101.1	- .12	- .2	.2796	97.3	+ .0033	+1.2
1900	50	113.6	-5	-10.0	50.24	100.7	+ .09	+ .2	.2837	98.7	— .0008	— .3
1901	45	102.3	.....	.....	50.60	101.4	- .27	- .5	.2750	95.7	+ .0079	+2.9
1902	46	104.5	-1	- 2.2	50.52	101.3	- .19	- .4	.2833	98.6	— .0004	— .1
1903	45	102.3	.....	.....	50.33	100.9	.....	.....	.2829	98.4	.....	.....

MOLD MAKERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	6	100.0	+2	+33.3	56.00	100.0	-1.37	-2.4	\$0.3023	100.0	+\$0.0438	+14.3
1890	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.3015	99.7	+ .0441	+14.6
1891	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.3003	99.3	+ .0453	+15.1
1892	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.2997	99.1	+ .0459	+15.3
1893	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.2844	94.1	+ .0612	+21.5
1894	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.2965	97.8	+ .0501	+17.0
1895	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.2946	97.5	+ .0510	+17.3
1896	6	100.0	+2	+33.3	56.17	100.3	-1.54	-2.7	.2941	97.3	+ .0515	+17.5
1897	7	116.7	+1	+14.3	55.71	99.5	-1.06	-1.9	.2902	96.0	+ .0364	+19.1
1898	7	116.7	+1	+14.3	55.71	99.5	-1.06	-1.9	.3449	114.1	+ .0007	+ .2
1899	8	133.3	.....	.....	55.38	98.9	- .75	-1.4	.3175	105.0	+ .0281	+ 8.9
1900	8	133.3	.....	.....	55.38	98.9	- .75	-1.4	.3060	101.2	+ .0396	+12.9
1901	8	133.3	.....	.....	55.38	98.9	- .75	-1.4	.3150	104.2	+ .0306	+ 9.7
1902	8	133.3	.....	.....	55.38	98.9	- .75	-1.4	.3189	105.5	+ .0367	+ 8.4
1903	8	133.3	.....	.....	54.63	97.6	.....	.....	.3456	114.3	.....	.....

PRESSERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	135	100.0	+7	+ 5.2	53.91	100.0	+0.13	+0.2	\$0.3651	100.0	+\$0.0130	+ 3.6
1890	131	97.0	+11	+ 8.4	53.66	99.5	+ .38	+ .7	.3714	101.7	+ .0067	+ 1.8
1891	149	110.4	-7	- 4.7	53.70	99.6	+ .34	+ .6	.3857	105.6	— .0076	- 2.0
1892	128	94.8	+14	+10.9	53.83	99.9	+ .21	+ .4	.3761	103.0	+ .0020	+ .5
1893	136	100.7	+6	+ 4.4	53.82	99.8	+ .22	+ .4	.3443	110.7	— .0262	- 6.5
1894	125	92.6	+17	+13.6	53.99	100.1	+ .05	+ .1	.3465	94.9	+ .0316	+ 9.1
1895	119	88.1	+23	+19.3	53.99	100.1	+ .05	+ .1	.3208	87.9	+ .0573	+17.9
1896	123	91.1	+19	+15.4	54.02	100.2	+ .02	+ .04	.3385	92.7	+ .0396	+11.7
1897	147	108.9	-5	- 3.4	53.88	99.9	+ .16	+ .3	.3647	99.9	+ .0134	+ 3.7
1898	150	111.1	-8	- 5.3	53.96	100.1	+ .09	+ .2	.3693	101.2	+ .0088	+ 2.4
1899	146	108.1	-4	- 2.7	54.21	100.6	- .17	- .3	.3737	102.4	+ .0044	+ 1.2
1900	140	103.7	+2	+ 1.4	54.20	100.5	- .16	- .3	.3448	94.4	+ .0333	+ 9.7
1901	141	104.4	+1	+ .7	54.05	100.3	- .01	- .02	.3726	102.1	+ .0065	+ 1.5
1902	125	92.6	+17	+13.6	54.42	100.9	- .38	- .7	.3633	99.5	+ .0148	+ 4.1
1903	142	105.2	.....	.....	54.04	100.2	.....	.....	.3781	103.6	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

POTTERY—Concluded.

SAGGER MAKERS, Male.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	6	100.0			50.67	100.0	-1.00	-2.0	\$0.3537	100.0	+\$0.0268	+7.6
1890	7	116.7	-1	-14.3	51.00	100.7	-1.33	-2.6	.3525	99.7	+.0280	+7.9
1891	7	116.7	-1	-14.3	51.00	100.7	-1.33	-2.6	.3521	99.6	+.0281	+8.0
1892	7	116.7	-1	-14.3	51.00	100.7	-1.33	-2.6	.3517	99.4	+.0280	+8.2
1893	6	100.0			50.67	100.0	-1.00	-2.0	.3465	98.0	+.0340	+9.6
1894	6	100.0			50.67	100.0	-1.00	-2.0	.3506	99.1	+.0296	+8.5
1895	6	100.0			50.67	100.0	-1.00	-2.0	.3445	97.4	+.0360	+10.4
1896	6	100.0			50.67	100.0	-1.00	-2.0	.3451	97.6	+.0351	+10.2
1897	6	100.0			50.67	100.0	-1.00	-2.0	.3415	96.6	+.0380	+11.4
1898	4	66.7	-2	-33.3	50.50	99.7	-.83	-1.6	.3395	107.6		
1899	5	83.3	-1	-20.0	49.80	98.3	-.83	-1.6	.3713	105.0	+.0492	+13.9
1900	6	100.0			50.33	99.3	-.66	-1.3	.3720	105.2	+.0485	+13.8
1901	6	100.0			50.33	99.3	-.66	-1.3	.3661	103.5	+.0444	+12.5
1902	6	100.0			50.33	99.3	-.66	-1.3	.3767	106.5	+.0638	+17.9
1903	6	100.0			49.67	98.0			.3805	107.6		

SETTERS-OUT, Male.

[Data from 4 establishments.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	7	100.0		47.43	100.0	-0.57	\$0.4181	100.0	+\$0.0025
1890	7	100.0		47.43	100.0	-.57	.4212	100.7	+.0002
1891	7	100.0		47.43	100.0	-.57	.4212	100.7	+.0002
1892	7	100.0		47.43	100.0	-.57	.4195	100.3	+.0017
1893	7	100.0		47.43	100.0	-.57	.4220	100.9	+.0010
1894	7	100.0		47.43	100.0	-.57	.4161	99.3	+.0049
1895	7	100.0		47.43	100.0	-.57	.4162	99.5	+.0048
1896	7	100.0		47.43	100.0	-.57	.4143	99.1	+.0067
1897	7	100.0		47.43	100.0	-.57	.4171	99.5	+.0049
1898	7	100.0		47.43	100.0	-.57	.4156	99.4	+.0054
1899	7	100.0		47.43	100.0	-.57	.4186	100.1	+.0024
1900	7	100.0		47.43	100.0	-.57	.4199	100.4	+.0011
1901	7	100.0		47.43	100.0	-.57	.4188	100.2	+.0022
1902	7	100.0		47.43	100.0	-.57	.4206	101.3	+.0026
1903	7	100.0		46.86	98.8		.4210	100.7	

PRINTING AND PUBLISHING, BOOK AND JOB.

BOOKBINDERS, Male.

[Data for employees from 32 establishments for entire period. Data for hours and wages from 2 establishments, 1890-1901; 33 establishments, 1895-1903.]

Year.	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	258	100.0		56.8	100.0	-1.20	\$0.2792	100.0	-\$0.0033
1890	226	87.6	-127	-56.2	58.29	101.1	-.83	.2684	96.1
1891	240	93.1	-123	-53.5	58.21	101.0	-.83	.2687	95.2
1892	258	99.2	-115	-48.3	58.12	100.8	-.86	.2740	98.1
1893	246	95.3	-107	-43.5	57.83	100.3	-.87	.2793	100.0
1894	240	93.0	-115	-47.1	57.80	100.2	-.84	.2775	99.3
1895	246	95.5	-117	-49.6	58.01	100.6	-.85	.2777	99.5
1896	257	99.6	-96	-37.4	57.91	100.4	-.85	.2797	100.2
1897	289	112.0	-64	-22.1	57.38	99.5	-.92	.2861	102.5
1898	301	117.8	-49	-16.1	56.95	98.8	-2.49	.2883	103.3
1899	314	121.7	-39	-12.4	56.07	97.2	-1.61	.2926	104.8
1900	343	129.1	-20	-6.0	55.47	96.2	-1.01	.2930	104.9
1901	340	131.8	-13	-3.8	55.12	95.6	-.67	.3011	108.9
1902	346	134.1	-7	-2.0	54.61	94.8	-.18	.3103	111.1
1903	353	136.8			54.16	94.5		.3125	111.9

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PRINTING AND PUBLISHING, BOOK AND JOB—Continued.

COMPOSITORS, Male.

[Data from 25 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	1,045	100.0	+209	+20.0	58.67	100.0	-1.47	-7.6	\$0.2734	100.0	+\$0.0428	+15.7
1890	971	92.9	+288	+29.1	59.28	101.0	-5.08	-8.6	.2672	97.7	+.0190	+18.3
1891	973	93.1	+281	+28.9	59.27	101.0	-5.07	-8.6	.2700	98.8	+.0162	+17.1
1892	987	94.4	+267	+27.1	59.17	100.9	-1.97	-8.4	.2704	98.9	+.0158	+16.9
1893	996	95.3	+258	+25.9	58.91	100.4	-1.71	-8.0	.2722	99.6	+.0140	+16.2
1894	1,019	97.5	+235	+23.1	58.85	100.3	-1.65	-7.8	.2741	100.3	+.0122	+15.4
1895	1,041	99.6	+215	+20.5	58.76	100.2	-1.66	-7.8	.2731	99.9	+.0131	+15.8
1896	1,039	99.4	+215	+20.7	58.66	100.0	-1.46	-7.6	.2718	99.4	+.0141	+16.3
1897	1,107	105.9	+147	+13.3	58.63	99.9	-1.43	-7.6	.2743	100.3	+.0119	+15.3
1898	1,128	107.9	+126	+11.2	58.37	99.5	-1.17	-7.1	.2761	101.0	+.0101	+14.5
1899	1,187	113.6	+67	+5.6	56.84	96.9	-2.64	-4.6	.2852	104.3	+.0310	+10.9
1900	1,277	122.2	-25	-1.8	55.50	94.6	-1.30	-2.3	.2934	107.3	+.0228	+7.9
1901	1,262	120.8	-8	-.6	54.99	93.7	-.79	-1.4	.2997	109.6	+.0165	+5.5
1902	1,238	116.7	+31	+2.8	54.24	92.4	-.04	-.1	.3108	113.7	+.0054	+1.7
1903	1,254	120.0			54.20	92.4			.3162	115.7		

COMPOSITORS, Female.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 5 establishments, 1890, 1891, 1893-1895, 1898, 1899; 6 establishments, 1892, 1897; 4 establishments, 1900; 3 establishments, 1901-1903.]

Av. 1890-99.	25	100.0	-6	-24.0	55.96	100.0	-2.15	-3.8	\$0.2101	100.0	+\$0.0384	+16.0
1890	25	100.0	-6	-24.0	57.78	103.3	-3.97	-6.9	.2280	95.0	+.0505	+22.1
1891	25	100.0	-6	-24.0	57.96	103.6	-4.15	-7.2	.2278	94.9	+.0507	+22.3
1892	24	96.0	+7	+29.2	56.21	100.4	-2.40	-4.3	.2374	98.9	+.0111	+17.3
1893	26	104.0	-5	-19.2	55.86	99.8	-2.05	-3.7	.2431	101.2	+.0354	+16.8
1894	25	100.0	-6	-24.0	55.22	98.7	-1.11	-2.6	.2406	100.2	+.0379	+17.8
1895	24	96.0	+7	+29.2	55.12	98.5	-1.31	-2.4	.2521	105.0	+.0261	+10.5
1896	27	108.0	+1	+11.8	55.31	98.8	-1.50	-2.7	.2435	101.4	+.0350	+14.4
1897	29	116.0	-2	-6.9	55.22	98.7	-1.41	-2.6	.2466	102.7	+.0319	+12.9
1898	25	100.0	-6	-24.0	55.63	99.4	-1.82	-3.3	.2382	99.2	+.0403	+16.9
1899	24	96.0	+7	+29.2	55.27	98.8	-1.46	-2.6	.2436	101.5	+.0349	+14.3
1900	25	100.0	-6	-24.0	55.50	99.2	-1.69	-3.0	.2589	107.8	+.0196	+7.6
1901	28	112.0	+3	+10.7	53.82	96.2	-.01	-.02	.2622	109.2	+.0163	+6.2
1902	28	112.0	+3	+10.7	53.82	96.2	-.01	-.02	.2622	109.2	+.0163	+6.2
1903	31	124.0			53.81	96.2			.2785	116.0		

ELECTROTYPERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	38	100.0	+1	+2.6	56.00	100.0	-2.08	-3.6	\$0.3217	100.0	+\$0.0166	+5.2
1890	37	97.4	+2	+5.4	56.19	100.3	-2.19	-3.9	.3238	100.7	+.0145	+4.5
1891	37	97.4	+2	+5.4	56.19	100.3	-2.19	-3.9	.3238	100.7	+.0145	+4.5
1892	36	94.7	+3	+8.3	56.25	100.1	-2.25	-4.0	.3235	100.6	+.0148	+4.6
1893	35	92.1	+4	+11.4	56.03	100.1	-2.03	-3.6	.3263	101.4	+.0120	+3.7
1894	37	97.4	+2	+5.4	56.19	100.3	-2.19	-3.9	.3224	100.2	+.0159	+4.9
1895	38	100.0	+1	+2.6	56.26	100.5	-2.26	-4.0	.3179	98.8	+.0201	+6.4
1896	38	100.0	+1	+2.6	56.26	100.5	-2.26	-4.0	.3188	99.1	+.0195	+6.1
1897	42	110.5	-3	-7.1	56.40	100.7	-2.40	-4.3	.3196	99.8	+.0197	+6.2
1898	41	107.9	-2	-4.9	55.85	99.7	-1.85	-3.3	.3211	99.8	+.0172	+5.4
1899	40	105.3	-1	-2.5	54.40	97.1	-.40	-.7	.3308	99.7	+.0175	+5.5
1900	37	97.4	+2	+5.4	54.43	97.2	-.43	-.8	.3221	100.1	+.0162	+5.0
1901	38	100.0	+1	+2.6	54.00	96.4	-.43	-.8	.3424	106.4	+.0101	+1.2
1902	40	105.3	-1	-2.5	54.00	96.4	-.43	-.8	.3382	105.1	+.0001	-.03
1903	39	102.6			54.00	96.4			.3283	105.2		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903.—Continued.

[Average 1890-1899 = 100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 7.]

PRINTING AND PUBLISHING, BOOK AND JOB—Continued

LINOTYPE OPERATORS, Male.

[No data, 1890, 1891; data from 1 establishment, 1892; 2 establishments, 1893; 3 establishments, 1894; 6 establishments, 1895; 8 establishments, 1896; 9 establishments, 1897, 1898; 11 establishments, 1900, 1901; 15 establishments, 1902, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.		
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase or decrease in 1903 as compared with year specified.
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1892.	1	(a)	(b)	(b)	59.00	(a)	-8.08	-13.7	80.3051	(a)	-\$0.1277
1893.	6	(a)	(b)	(b)	54.83	(a)	-3.91	-7.1	3593	(a)	-0.078
1894.	14	(a)	(b)	(b)	50.93	(a)	-0.01	-0.2	3907	(a)	-0.021
1895.	35	(a)	(b)	(b)	55.51	(a)	-4.59	-8.3	3597	(a)	-0.071
1896.	31	(a)	(b)	(b)	55.23	(a)	-4.31	-7.8	3920	(a)	-0.008
1897.	47	(a)	(b)	(b)	56.47	(a)	-5.55	-9.8	3696	(a)	+0.032
1898.	45	(a)	(b)	(b)	56.00	(a)	-6.08	-9.1	3985	(a)	-0.045
1899.	68	(a)	(b)	(b)	52.10	(a)	-1.98	-3.7	4123	(a)	-0.026
1900.	73	(a)	(b)	(b)	52.08	(a)	-1.16	-2.2	4338	(a)	-0.010
1901.	77	(a)	(b)	(b)	52.38	(a)	-1.46	-2.8	4259	(a)	-0.009
1902.	87	(a)	(b)	(b)	51.31	(a)	-0.39	-0.8	4312	(a)	-0.010
1903.	88	(a)	(b)	(b)	50.92	(a)			4328	(a)	

PRESS FEEDERS, Male.

[Data from 23 establishments.]

Av. 1890-99.	246	100.0	+84	+34.1	57.97	100.0	-3.50	-6.0	80.1445	100.0	+4.0029
1890.	207	84.1	+123	+59.4	58.41	100.8	-3.94	-6.7	1414	97.9	-0.090
1891.	209	85.0	+121	+57.9	58.17	100.3	-3.70	-6.4	1445	100.0	-0.059
1892.	219	89.0	+111	+50.7	58.15	100.3	-3.68	-6.3	1430	99.0	-0.074
1893.	229	93.1	+101	+44.1	58.02	100.1	-3.55	-6.1	1423	98.5	-0.081
1894.	227	92.3	+103	+45.4	57.93	99.9	-3.48	-6.0	1447	100.1	-0.057
1895.	251	102.0	+79	+31.5	58.15	100.3	-3.68	-6.3	1461	101.1	-0.024
1896.	257	104.5	+73	+28.4	58.18	100.4	-3.71	-6.4	1473	99.2	-0.071
1897.	270	109.8	+60	+22.2	58.21	100.4	-3.74	-6.4	1433	99.2	-0.071
1898.	290	117.9	+40	+13.8	57.36	98.9	-2.89	-5.0	1468	101.6	-0.036
1899.	301	122.4	+29	+9.6	57.13	98.6	-2.66	-4.7	1496	103.5	-0.008
1900.	321	130.5	+9	+2.8	55.27	95.3	-1.80	-1.4	1731	119.8	-0.075
1901.	307	124.8	+23	+7.6	55.34	95.5	-1.87	-1.6	1736	120.1	-0.008
1902.	336	136.6	-6	-1.8	54.68	94.2	-1.11	-2	1786	121.5	-0.008
1903.	339	134.1			54.47	94.0			1804	124.8	

a Not computed, as data reported do not cover entire base period.

b Not computed, as number of establishments varies for different years.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PRINTING AND PUBLISHING, BOOK AND JOB—Continued.

PRESS FEEDERS, Female.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1897, 1900, 1901; 6 establishments, 1898, 1899, 1902, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	31	100.0	+ 6	+17.6	58.82	100.0	-4.82	-8.2	\$0.0918	100.0	+\$0.0155	+16.9
1890	32	94.1	+ 8	+25.0	59.18	100.6	-5.18	-8.8	.0912	99.3	+ .0161	+17.7
1891	32	94.1	+ 8	+25.0	59.18	100.6	-5.18	-8.8	.0912	99.3	+ .0161	+17.7
1892	30	88.2	+10	+33.3	59.18	100.6	-5.18	-8.8	.0918	100.0	+ .0155	+16.9
1893	33	97.1	+ 7	+21.2	59.18	100.6	-5.18	-8.8	.0904	98.6	+ .0169	+18.7
1894	31	91.2	+ 9	+29.0	59.16	100.6	-5.16	-8.7	.0902	98.3	+ .0171	+19.0
1895	31	91.2	+ 9	+29.0	59.13	100.5	-5.13	-8.7	.0895	97.9	+ .0178	+19.9
1896	31	91.2	+ 9	+29.0	59.18	100.6	-5.18	-8.8	.0917	99.9	+ .0156	+17.0
1897	35	102.9	+ 5	+14.3	59.19	100.6	-5.19	-8.8	.0914	99.6	+ .0159	+17.4
1898	35	102.9	+ 5	+14.3	59.02	98.6	-4.02	-6.9	.0941	102.5	+ .0182	+14.0
1899	50	147.1	-10	-20.0	56.80	96.6	-2.80	-4.9	.0967	105.3	+ .0106	+11.0
1900	44	129.4	-4	-9.1	54.22	92.2	-2.22	-4	.1000	108.9	+ .0073	+ 7.3
1901	45	132.4	-5	-11.1	54.21	92.2	-2.21	-4	.1024	111.6	+ .0049	+ 4.8
1902	43	126.5	-3	-7.0	54.15	92.1	-1.15	-3	.1050	114.4	+ .0023	+ 2.3
1903	40	117.6			54.00	91.8			.1073	116.9		

PRESSMEN, Male.

[Data from 61 establishments.]

Av. 1890-99.	358	100.0	+ 79	+20.6	58.71	100.0	-4.23	-7.2	\$0.2765	100.0	+\$0.0407	+11.7
1890	347	96.6	+115	+33.1	59.11	100.7	-4.68	-7.8	.2705	97.8	+ .0467	+11.3
1891	356	100.0	+106	+29.8	59.02	100.5	-4.54	-7.7	.2738	99.0	+ .0434	+15.9
1892	360	94.0	+102	+28.8	59.08	100.5	-4.62	-7.7	.2749	99.4	+ .0428	+15.4
1893	367	95.8	+ 95	+25.9	58.96	100.5	-4.51	-7.6	.2734	98.9	+ .0438	+16.0
1894	365	95.8	+ 97	+26.6	58.81	100.2	-4.83	-7.4	.2747	99.3	+ .0426	+15.5
1895	371	96.9	+ 91	+24.5	58.81	100.2	-4.83	-7.4	.2754	99.6	+ .0418	+15.2
1896	389	101.6	+ 73	+18.8	58.86	100.3	-4.38	-7.4	.2750	99.5	+ .0422	+15.3
1897	402	105.0	+ 60	+14.9	58.88	100.3	-4.40	-7.5	.2787	100.8	+ .0385	+12.8
1898	431	112.5	+ 81	+ 7.2	58.46	99.6	-3.98	-6.8	.2793	101.0	+ .0379	+13.6
1899	443	115.7	+ 19	+ 4.3	57.13	97.3	-2.65	-4.6	.2894	104.7	+ .0278	+ 9.6
1900	451	117.8	+ 11	+ 2.4	56.08	95.5	-1.60	-2.9	.2967	107.3	+ .0206	+ 6.9
1901	460	120.1	+ 7	+ 1.5	54.47	93.9	-1.67	-1.2	.3072	111.1	+ .0100	+ 3.3
1902	450	118.8	+ 7	+ 1.4	54.47	92.8	+ .01	+ .02	.3111	112.5	+ .0061	+ 2.0
1903	462	120.6			54.48	92.8			.3172	114.7		

PROOF READERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 13 establishments, 1890, 1891; 12 establishments, 1892-1894, 1902, 1903; 11 establishments, 1895-1901.]

Av. 1890-99.	28	100.0	+ 9	+32.1	59.57	100.0	-6.96	-11.7	\$0.3238	100.0	+\$0.0690	+21.3
1890	29	103.6	+ 8	+27.6	59.94	100.6	-7.53	-12.2	.3254	100.6	+ .0669	+20.6
1891	29	103.6	+ 8	+27.6	59.94	100.6	-7.53	-12.2	.3270	101.1	+ .0658	+20.0
1892	29	103.6	+ 8	+27.6	59.93	100.6	-7.52	-12.2	.3199	98.9	+ .0724	+22.6
1893	29	103.6	+ 8	+27.6	59.93	100.6	-7.52	-12.2	.3282	100.0	+ .0691	+21.4
1894	27	96.4	+10	+37.0	59.93	100.6	-7.52	-12.2	.3218	99.4	+ .0710	+22.1
1895	26	92.9	+11	+42.3	59.96	100.7	-7.85	-12.3	.3259	100.8	+ .0664	+20.4
1896	26	100.0	+ 9	+32.1	59.96	100.7	-7.85	-12.3	.3229	99.9	+ .0694	+21.5
1897	26	100.0	+ 9	+32.1	59.96	100.7	-7.85	-12.3	.3235	100.1	+ .0688	+21.3
1898	26	100.0	+ 9	+32.1	59.61	100.1	-7.00	-11.7	.3264	101.0	+ .0659	+20.2
1899	30	107.1	+ 7	+23.3	56.50	94.8	-3.89	-6.9	.3178	98.1	+ .0750	+23.6
1900	32	114.3	+ 5	+15.6	55.00	92.3	-2.39	-4.3	.3469	107.3	+ .0454	+18.1
1901	34	121.4	+ 3	+ 8.7	55.08	92.4	-2.42	-4.4	.3588	109.4	+ .0395	+10.9
1902	35	125.0	+ 2	+ 6.7	52.69	88.5	-1.08	-2	.3853	119.2	+ .0070	+ 1.8
1903	37	132.1			52.61	88.3			.3923	121.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903 as compared with previous years, see note on page 715.]

PRINTING AND PUBLISHING, NEWSPAPER—Continued.

LINOTYPE OPERATORS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890; 5 establishments, 1891; 16 establishments, 1892; 32 establishments, 1893; 54 establishments, 1894; 69 establishments, 1895; 80 establishments, 1896; 88 establishments, 1897; 94 establishments, 1898; 99 establishments, 1899; 103 establishments, 1900; 102 establishments, 1901; 96 establishments, 1902; 104 establishments, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	39	100.0	- 5	-12.8	47.95	100.0	-0.20	-0.4	\$0.5076	100.0	+\$0.003	+ 4
1890	36	92.3	- 2	- 5.6	48.00	100.1	- .25	- .5	.5625	110.8	- .0018	- .4
1891	39	100.0	- 5	-12.8	47.26	98.6	+ .49	+1.0	.5393	106.2	- .0118	- 2.2
1892	46	117.9	-12	-26.1	48.64	101.4	- .89	-1.8	.4666	91.9	+ .0211	+ 4.2
1893	38	97.4	- 4	-10.5	49.15	102.5	-1.40	-2.8	.4949	97.5	- .0028	- .6
1894	30	76.9	+ 4	+13.3	48.22	100.6	- .47	-1.0	.4669	91.9	+ .0008	+ .2
1895	36	92.3	- 2	- 5.6	47.66	99.4	+ .09	+ .2	.5047	99.4	+ .0029	+ .6
1896	43	110.3	- 9	-20.9	47.57	99.2	+ .18	+ .4	.5030	99.1	+ .0017	+ .4
1897	43	110.3	- 9	-20.9	47.63	99.3	+ .12	+ .3	.5010	98.7	+ .0017	+ .4
1898	37	94.9	- 3	- 8.1	47.72	99.5	+ .08	+ .1	.4967	98.2	+ .0014	+ .3
1899	39	100.0	- 5	-12.8	47.69	99.5	+ .06	+ .1	.4963	98.2	+ .0014	+ .3
1900	53	134.6	+ 1	+ 3.0	47.67	99.4	+ .08	+ .2	.4961	98.2	+ .0014	+ .3
1901	30	76.9	+ 4	+13.3	47.89	99.9	- .14	- .3	.5056	99.6	- .0021	- .4
1902	39	100.0	- 5	-12.8	47.67	99.4	+ .08	+ .2	.5129	101.0	+ .0028	+ .6
1903	31	87.2			47.55	99.0			.5277	104.0		

LINOTYPE OPERATORS, Female.

[No data, 1890, 1891; data from 1 establishment, 1892, 1893; 2 establishments, 1894; 4 establishments, 1895; 5 establishments, 1896; 6 establishments, 1897; 7 establishments, 1898; 1901-1903; 8 establishments, 1899, 1900.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.		(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1892	4	(a)	(b)	(b)	49.50	(a)	+3.56	+7.2	50.1620	(a)	-\$0.1077	- 2.1
1893	4	(a)	(b)	(b)	49.50	(a)	+3.56	+7.2	50.1620	(a)	+ .1077	+ 2.1
1894	6	(a)	(b)	(b)	51.00	(a)	+2.06	+4.0	.2665	(a)	+ .0028	+ .6
1895	18	(a)	(b)	(b)	51.50	(a)	+1.56	+3.0	.2907	(a)	+ .0014	+ .3
1896	21	(a)	(b)	(b)	50.71	(a)	+2.35	+4.6	.3351	(a)	+ .0038	+ .8
1897	24	(a)	(b)	(b)	51.13	(a)	+1.93	+3.8	.3372	(a)	+ .0039	+ .8
1898	27	(a)	(b)	(b)	51.67	(a)	+1.39	+2.7	.2998	(a)	+ .0035	+ .8
1899	23	(a)	(b)	(b)	51.83	(a)	+1.23	+2.4	.2944	(a)	+ .0031	+ .7
1900	29	(a)	(b)	(b)	51.83	(a)	+1.23	+2.4	.2944	(a)	+ .0031	+ .7
1901	29	(a)	(b)	(b)	51.52	(a)	+1.54	+3.0	.2820	(a)	+ .0037	+ .8
1902	28	(a)	(b)	(b)	53.14	(a)	- .06	- .2	.2840	(a)	+ .0037	+ .8
1903	32	(a)			53.06	(a)			.2793	(a)		

PRESSMEN, Male.

[Data for employees from 186 establishments for entire period. Data for hours and wages from 186 establishments, 1890-1891; 187 establishments, 1891-1892; 188 establishments, 1892-1893.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	338	100.0	+138	+38.5	51.26	100.0	-1.48	-2.9	\$0.3675	100.0	+\$0.0462	+12.5
1890	310	86.6	+186	+60.0	51.81	101.1	-2.03	-3.9	.3596	97.9	+ .0541	+14.7
1891	317	88.5	+179	+56.5	51.78	101.0	-2.00	-3.9	.3590	97.7	+ .0547	+14.8
1892	331	92.5	+165	+49.8	51.73	100.9	-1.95	-3.8	.3586	97.6	+ .0551	+14.9
1893	339	94.7	+157	+46.3	51.76	101.0	-1.98	-3.8	.3613	98.3	+ .0524	+14.5
1894	342	95.5	+154	+45.0	51.52	100.5	-1.74	-3.4	.3643	98.9	+ .0501	+14.1
1895	341	95.3	+155	+45.5	51.33	100.1	-1.55	-3.0	.3655	99.5	+ .0482	+13.7
1896	379	105.9	+117	+30.9	51.06	99.6	-1.28	-2.5	.3781	101.5	+ .0466	+13.5
1897	384	107.3	+112	+29.2	50.64	98.8	- .88	-1.7	.3740	101.8	+ .0487	+13.9
1898	410	114.5	+ 86	+21.0	50.57	98.7	- .79	-1.6	.3781	102.9	+ .0486	+13.8
1899	426	119.0	+ 70	+16.4	50.36	98.2	- .58	-1.2	.3828	104.2	+ .0409	+10.7
1900	411	123.2	+ 55	+12.5	50.12	97.8	- .34	- .7	.3856	104.9	+ .0381	+10.2
1901	458	127.9	+ 28	+ 8.3	50.00	97.5	- .22	- .4	.3899	106.1	+ .0289	+ 7.8
1902	479	133.8	+ 17	+ 3.5	49.96	97.3	- .12	- .2	.4008	109.1	+ .0129	+ 3.5
1903	496	138.5			49.78	97.1			.4137	112.6		

* Not computed, as data do not cover entire base period.

* Not computed, as number of establishments varies for different years.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

PRINTING AND PUBLISHING, NEWSPAPER—Concluded.

STEREOTYPERS, Male.

[Data for employees from 76 establishments for entire period. Data for hours and wages from 76 establishments, 1890; 77 establishments, 1891-1893; 78 establishments, 1894, 1895; 79 establishments, 1896-1903].

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	301	100.0	+ 69	+22.9	48.77	100.0	-0.72	-1.5	\$0.4445	100.0	+\$0.0367	+ 8.3
1890	254	84.4	+116	+45.7	48.93	100.3	- .88	-1.8	.4199	94.5	+ .0613	+14.6
1891	255	84.7	+115	+45.1	49.05	100.6	-1.00	-2.0	.4205	94.6	+ .0607	+14.4
1892	273	90.7	+ 97	+33.5	49.09	100.7	-1.04	-2.1	.4340	97.6	+ .0472	+10.9
1893	292	97.0	+ 78	+26.7	49.01	100.5	- .96	-2.0	.4413	99.3	+ .0399	+ 9.0
1894	293	97.3	+ 77	+26.3	49.01	100.5	- .96	-2.0	.4380	98.5	+ .0432	+ 9.9
1895	300	99.7	+ 70	+23.3	48.99	100.5	- .94	-1.9	.4407	99.1	+ .0405	+ 9.2
1896	330	109.6	+ 40	+12.1	48.77	100.0	- .72	-1.5	.4549	102.3	+ .0263	+ 5.8
1897	330	109.6	+ 40	+12.1	48.50	99.4	- .45	- .9	.4573	102.9	+ .0239	+ 5.2
1898	336	111.6	+ 34	+10.1	48.29	99.0	- .24	- .5	.4671	105.1	+ .0141	+ 3.0
1899	346	115.0	+ 24	+ 6.9	48.10	98.6	- .05	- .1	.4710	106.0	+ .0102	+ 2.2
1900	346	115.0	+ 24	+ 6.9	48.14	98.7	- .09	- .2	.4675	105.2	+ .0137	+ 2.9
1901	359	119.3	+ 11	+ 3.1	48.01	98.4	+ .01	+ .1	.4749	106.8	+ .0063	+ 1.3
1902	369	122.6	+ 1	+ .3	48.02	98.5	+ .03	+ .1	.4773	107.4	+ .0039	+ .8
1903	370	122.9			48.05	98.5			.4812	108.3		

ROPE AND TWINE.

FINISHERS, Female.

[Data from 1 establishment.]

Av. 1890-99.	19	100.0	-1	- 5.3	60.00	100.0			\$0.0800	100.0		
1890	18	94.7			60.00	100.0			.0800	100.0		
1891	18	94.7			60.00	100.0			.0800	100.0		
1892	18	91.7			60.00	100.0			.0800	100.0		
1893	20	105.3	-2	-10.0	60.00	100.0			.0800	100.0		
1894	20	105.3	-2	-10.0	60.00	100.0			.0800	100.0		
1895	20	105.3	-2	-10.0	60.00	100.0			.0800	100.0		
1896	18	94.7			60.00	100.0			.0800	100.0		
1897	18	94.7			60.00	100.0			.0800	100.0		
1898	18	94.7			60.00	100.0			.0800	100.0		
1899	20	105.3	-2	-10.0	60.00	100.0			.0800	100.0		
1900	20	105.3	-2	-10.0	60.00	100.0			.0800	100.0		
1901	18	94.7			60.00	100.0			.0800	100.0		
1902	18	94.7			60.00	100.0			.0800	100.0		
1903	18	94.7			60.00	100.0			.0800	100.0		

HEMP PREPARERS, MACHINE, Male.

[Data from 1 establishment.]

Av. 1890-99.	12	100.0	+ 9	+ 75.0	60.00	100.0			\$0.1674	100.0	-\$0.0003	-0.2
1890	11	91.7	+10	+ 90.9	60.00	100.0			.1636	97.7	+ .0035	+2.1
1891	10	83.3	+11	+110.0	60.00	100.0			.1650	98.6	+ .0021	+1.3
1892	11	91.7	+10	+ 90.9	60.00	100.0			.1636	97.7	+ .0035	+2.1
1893	12	100.0	+ 9	+ 75.0	60.00	100.0			.1647	99.6	+ .0004	+ .2
1894	10	83.3	+11	+110.0	60.00	100.0			.1642	98.1	+ .0029	+1.8
1895	12	100.0	+ 9	+ 75.0	60.00	100.0			.1701	101.6	- .0030	-1.8
1896	10	83.3	+11	+110.0	60.00	100.0			.1733	103.5	- .0062	-3.6
1897	14	116.7	+ 7	+ 50.0	60.00	100.0			.1708	102.0	- .0037	-2.2
1898	16	133.3	+ 6	+ 31.3	60.00	100.0			.1677	100.2	- .0006	- .4
1899	15	125.0	+ 6	+ 40.0	60.00	100.0			.1694	101.2	- .0023	-1.4
1900	13	108.3	+ 8	+ 61.5	60.00	100.0			.1692	101.1	- .0021	-1.2
1901	14	116.7	+ 7	+ 50.0	60.00	100.0			.1685	100.7	- .0014	- .8
1902	24	200.0	- 3	-12.5	60.00	100.0			.1649	98.5	+ .0022	+1.3
1903	21	175.0			60.00	100.0			.1671	99.8		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

ROPE AND TWINE—Continued.

LABORERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	63	100.0	- 6	- 9.5	60.00	100.0			\$0.1416	100.0	+\$0.0017	+ 1.2
1890.	51	81.0	+ 6	+11.8	60.00	100.0			.1395	98.5	+	.0038
1891.	48	76.2	+ 9	+18.8	60.00	100.0			.1411	99.6	+	.0022
1892.	79	125.4	-22	-27.8	60.00	100.0			.1401	98.9	+	.0032
1893.	80	127.0	-23	-28.8	60.00	100.0			.1417	100.1	+	.0016
1894.	53	84.1	+ 4	+ 7.5	60.00	100.0			.1418	100.1	+	.0015
1895.	76	120.6	-19	-25.0	60.00	100.0			.1431	101.1	+	.0002
1896.	79	125.4	-22	-27.8	60.00	100.0			.1429	100.9	+	.0004
1897.	64	101.6	- 7	-10.9	60.00	100.0			.1396	98.6	+	.0057
1898.	50	79.4	+ 7	+14.0	60.00	100.0			.1428	100.8	+	.0005
1899.	53	84.1	+ 4	+ 7.5	60.00	100.0			.1434	101.3	-	.0001
1900.	49	77.8	+ 8	+16.3	60.00	100.0			.1427	100.8	+	.0006
1901.	53	84.1	+ 4	+ 7.5	60.00	100.0			.1423	100.5	+	.0010
1902.	61	96.8	- 4	- 6.6	60.00	100.0			.1441	101.8	-	.0008
1903.	57	90.5			60.00	100.0			.1433	101.2		

LAYERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	2	100.0			60.00	100.0			\$0.1400	100.0		
1890.	2	100.0			60.00	100.0			.1400	100.0		
1891.	2	100.0			60.00	100.0			.1400	100.0		
1892.	2	100.0			60.00	100.0			.1400	100.0		
1893.	2	100.0			60.00	100.0			.1400	100.0		
1894.	2	100.0			60.00	100.0			.1400	100.0		
1895.	2	100.0			60.00	100.0			.1400	100.0		
1896.	2	100.0			60.00	100.0			.1400	100.0		
1897.	2	100.0			60.00	100.0			.1400	100.0		
1898.	2	100.0			60.00	100.0			.1400	100.0		
1899.	2	100.0			60.00	100.0			.1400	100.0		
1900.	2	100.0			60.00	100.0			.1400	100.0		
1901.	2	100.0			60.00	100.0			.1400	100.0		
1902.	2	100.0			60.00	100.0			.1400	100.0		
1903.	2	100.0			60.00	100.0			.1400	100.0		

ROPE MAKERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	46	100.0	+2	+ 4.3	60.00	100.0			\$0.1829	100.0	-\$0.0041	- 2.2
1890.	49	106.5	-1	- 2.0	60.00	100.0			.1770	96.8	+	.0100
1891.	42	91.3	+6	+14.3	60.00	100.0			.1804	98.6	+	.0066
1892.	46	100.0	+2	+ 4.3	60.00	100.0			.1833	100.2	+	.0037
1893.	50	108.7	-2	- 4.0	60.00	100.0			.1855	101.4	-	.0015
1894.	13	30.5	+5	+11.6	60.00	100.0			.1870	102.2		
1895.	49	106.5	-1	- 2.0	60.00	100.0			.1806	98.7	+	.0064
1896.	53	115.2	-5	- 9.4	60.00	100.0			.1778	97.2	+	.0092
1897.	44	95.7	+4	+ 9.1	60.00	100.0			.1884	103.0	-	.0014
1898.	40	87.0	+8	+20.0	60.00	100.0			.1829	100.0	+	.0041
1899.	42	91.3	+6	+14.3	60.00	100.0			.1863	101.9	-	.0007
1900.	40	87.0	+8	+20.0	60.00	100.0			.1917	104.8	-	.0047
1901.	47	102.2	+1	+ 2.1	60.00	100.0			.1833	100.2	+	.0057
1902.	46	100.0	+2	+ 4.3	60.00	100.0			.1861	101.7	-	.0008
1903.	48	104.3			60.00	100.0			.1870	102.2		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

ROPE AND TWINE—Concluded.

SPINNERS, HEMP, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	67	100.0	+2	+3.0	60.00	100.0	.....	.....	\$0.1235	100.0	+\$0.0027	+2.2
1890	65	97.0	+	+6.2	60.00	100.0	.....	.....	.1277	103.4	- .0015	-1.2
1891	63	94.0	+6	+9.5	60.00	100.0	.....	.....	.1232	99.8	+ .0030	+2.4
1892	69	103.0	.....	.....	60.00	100.0	.....	.....	.1271	102.9	- .0009	-.7
1893	69	103.0	.....	.....	60.00	100.0	.....	.....	.1182	95.7	+ .0080	+6.8
1894	67	100.0	+2	+3.0	60.00	100.0	.....	.....	.1200	97.2	+ .0062	+5.2
1895	70	104.5	-1	-1.4	60.00	100.0	.....	.....	.1369	110.9	- .0107	-7.8
1896	68	101.5	+1	+1.5	60.00	100.0	.....	.....	.1191	96.4	+ .0071	+6.0
1897	66	98.5	+3	+4.5	60.00	100.0	.....	.....	.1201	97.2	+ .0061	+5.1
1898	66	98.5	+3	+4.5	60.00	100.0	.....	.....	.1196	96.8	+ .0066	+5.5
1899	66	98.5	+3	+4.5	60.00	100.0	.....	.....	.1232	99.8	+ .0030	+2.4
1900	64	95.5	+5	+7.8	60.00	100.0	.....	.....	.1226	99.3	+ .0036	+2.9
1901	64	95.5	+5	+7.8	60.00	100.0	.....	.....	.1177	95.3	+ .0085	+7.2
1902	67	100.0	+2	+3.0	60.00	100.0	.....	.....	.1265	102.4	- .0003	-.2
1903	69	103.0	.....	.....	60.00	100.0	.....	.....	.1262	101.2	.....	.....

TWISTERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	11	100.0	-1	-9.1	60.00	100.0	.....	.....	\$0.1300	100.0	.....	.....
1890	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1891	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1892	12	109.1	-2	-16.7	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1893	12	109.1	-2	-16.7	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1894	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1895	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1896	12	109.1	-2	-16.7	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1897	12	109.1	-2	-16.7	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1898	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1899	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1900	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1901	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1902	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....
1903	10	90.9	.....	.....	60.00	100.0	.....	.....	.1300	100.0	.....	.....

SHIPBUILDING.

BLACKSMITHS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 11 establishments, 1890; 12 establishments, 1891-1895; 13 establishments, 1896-1898; 14 establishments, 1899-1903.]

Av. 1890-99.	119	100.0	+37	+31.1	59.29	100.0	-0.68	-1.1	\$0.2096	100.0	+\$0.0152	+5.6
1890	78	65.5	+78	+100.0	59.60	100.5	- .99	-1.7	.2614	97.0	+ .0234	+9.0
1891	89	74.8	+67	+75.3	59.58	100.5	- .97	-1.6	.2702	100.2	+ .0146	+5.4
1892	100	84.0	+66	+66.0	59.58	100.5	- .97	-1.6	.2687	99.7	+ .0161	+6.0
1893	97	81.5	+59	+60.8	59.24	99.9	- .63	-1.1	.2676	99.3	+ .0172	+6.4
1894	118	99.2	+38	+32.2	59.29	100.0	- .68	-1.1	.2610	96.8	+ .0238	+9.1
1895	164	137.8	-8	-4.9	59.40	100.2	- .79	-1.3	.2638	97.8	+ .0210	+8.0
1896	115	95.6	+41	+35.7	58.95	99.4	- .34	- .6	.2824	104.7	+ .0024	+ .8
1897	120	100.8	+36	+30.0	58.97	99.5	- .36	- .6	.2905	101.0	+ .0043	+1.5
1898	167	140.3	-11	-6.6	59.26	99.9	- .65	-1.1	.2680	99.4	+ .0168	+6.3
1899	145	121.8	+11	+7.6	59.03	99.6	- .42	- .7	.2724	101.0	+ .0124	+4.6
1900	139	116.8	+17	+12.2	59.09	99.7	- .48	- .8	.2727	101.1	+ .0121	+4.4
1901	146	122.7	+10	+6.8	59.06	99.6	- .45	- .7	.2711	100.6	+ .0138	+5.1
1902	169	142.0	-13	-7.7	58.79	99.2	- .18	- .3	.2799	103.8	+ .0049	+1.8
1903	156	131.1	.....	.....	58.61	98.9	.....	.....	.2848	105.6	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

SHIPBUILDING—Continued.

BOILER MAKERS, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 1 establishments, 1890, 1894, 1896; 7 establishments, 1891-1893, 1896-1898; 8 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	141	100.0	+102	+72.3	59.63	100.0	-0.40	-0.7	\$0.2522	100.0	+\$0.0046	+1.8
1890	78	55.3	+165	+211.5	59.56	99.9	-33	-6	.2477	98.2	-.0091	-3.7
1891	63	44.7	+180	+245.7	59.66	100.1	-43	-7	.2486	98.6	-.0082	-3.3
1892	88	62.4	+155	+176.1	59.72	100.2	-49	-8	.2536	100.6	+.0032	+1.3
1893	127	90.1	+116	+91.3	59.78	100.3	-55	-9	.2503	99.2	-.0055	-2.2
1894	135	95.7	+108	+80.0	59.76	100.2	-53	-9	.2404	95.3	-.0161	-6.5
1895	151	107.1	+92	+60.9	59.61	100.6	-38	-6	.2523	100.0	-.0045	-1.8
1896	127	90.1	+116	+91.3	59.47	99.7	-24	-4	.2633	104.4	+.0065	+2.5
1897	124	87.9	+119	+96.0	59.46	99.7	-23	-4	.2567	101.8	+.0061	+2.4
1898	296	209.9	-53	-17.9	59.63	100.1	-46	-8	.2335	100.5	+.0053	+2.1
1899	217	153.9	+26	+12.0	59.59	99.9	-36	-6	.2560	101.5	+.0068	+2.7
1900	222	157.1	-49	-16.8	59.65	100.0	-42	-7	.2511	99.6	-.0057	-2.3
1901	248	175.9	-5	-2.0	59.52	99.8	-29	-5	.2559	101.5	+.0069	+2.7
1902	262	185.8	-19	-7.3	59.43	99.7	-20	-3	.2597	102.6	+.0019	+.7
1903	213	152.3			59.27	99.3			.2598	101.8		

CALKERS, IRON, Male.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 4 establishments, 1890, 1893; 5 establishments, 1891-1894, 1896-1898; 6 establishments, 1899-1902; 7 establishments, 1903.]

Av. 1890-99.	31	100.0	+19	+55.9	58.67	100.0	-1.37	-2.3	\$0.2259	100.0	-\$0.1080	-47.8
1890	29	85.3	-24	-82.8	58.97	100.5	-1.67	-2.8	.2086	92.3	-.1251	-55.7
1891	61	179.4	-8	-13.8	59.44	101.3	-2.14	-3.6	.1913	84.7	-.1425	-63.6
1892	26	76.5	-27	-103.8	58.87	100.3	-1.57	-2.7	.2117	93.7	-.1222	-54.4
1893	19	55.9	+34	+178.9	58.23	99.3	-1.93	-1.6	.2327	103.0	-.1012	-45.4
1894	18	52.9	+35	+194.4	57.91	98.7	-1.61	-1.1	.2255	100.3	-.1075	-47.6
1895	17	50.0	+36	+211.8	57.94	98.8	-1.64	-1.1	.2338	103.5	-.1001	-44.8
1896	10	31.6	-13	-32.5	59.02	100.6	-1.72	-2.9	.2418	107.0	-.0921	-40.5
1897	31	100.0	-19	-55.9	58.42	98.6	-1.12	-1.9	.2329	103.1	-.1010	-45.4
1898	45	126.5	+10	+23.3	59.02	100.6	-1.72	-2.9	.2475	109.6	-.0864	-38.4
1899	52	152.9	+1	+1.9	58.85	100.3	-1.55	-2.6	.2424	102.9	-.1015	-45.7
1900	41	129.6	-12	-29.3	58.61	99.9	-1.34	-2.3	.2443	108.1	-.0866	-38.7
1901	62	182.4	-9	-14.5	56.37	96.1	+1.93	+1.6	.2471	109.4	-.0868	-38.8
1902	68	200.0	-15	-22.1	55.20	94.3	+2.00	+3.6	.2806	124.2	-.0553	-25.0
1903	53	155.9			57.20	97.7			.3339	147.8		

CALKERS, WOOD, Male.

[Data from 2 establishments.]

Av. 1890-99.	143	100.0	+91	+63.6	51.17	100.0	0	-6.3	\$0.3463	100.0	+\$0.0231	+6.7
1890	132	92.3	+104	+78.8	51.41	100.4	-3.64	-6.7	.3443	99.4	-.0154	-4.5
1891	132	92.3	+104	+78.8	51.50	100.6	-3.75	-6.8	.3435	99.2	-.0162	-4.7
1892	128	89.5	+108	+84.1	51.25	100.2	-3.51	-6.5	.3422	98.8	-.0177	-5.1
1893	159	111.2	+77	+48.4	51.15	100.0	3.38	+6.2	.3440	99.3	-.0167	-4.9
1894	119	83.2	-117	-98.3	51.10	99.9	3.33	+6.2	.3406	98.4	-.0191	-5.5
1895	132	92.3	+104	+78.8	51.95	99.6	3.18	+5.9	.3495	99.3	-.0192	-5.6
1896	131	91.6	+105	+80.2	51.18	100.0	3.41	+6.3	.3410	98.5	-.0187	-5.4
1897	115	80.4	-91	-62.8	51.00	99.7	3.35	+6.0	.3417	100.3	-.0182	-5.3
1898	179	125.2	-57	-31.8	51.00	99.7	3.23	+6.0	.3396	103.8	-.0201	-5.8
1899	174	121.7	-62	-35.6	51.14	99.9	3.37	+6.2	.3402	101.0	-.0175	-5.1
1900	176	123.1	-60	-34.1	51.01	99.7	3.26	+6.0	.3357	105.6	-.0146	-4.3
1901	222	155.2	-44	-30.3	51.05	99.8	3.28	+6.1	.3812	110.1	-.0016	-.4
1902	227	159.9	-43	-29.8	51.95	99.6	3.18	+5.9	.3755	108.4	-.0042	-1.1
1903	236	165.0			50.77	97.7			.4797	169.6		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

SHIPBUILDING—Continued.

CARPENTERS, Male.

[Data for employees from 18 establishments for entire period. Data for hours and wages from 19 establishments, 1890-1892, 1894, 1895; 20 establishments, 1893, 1896-1898; 21 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive number.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average number.	Rela-tive number.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	742	100.0	+396	+53.4	57.57	100.0	-1.76	-3.1	\$0.2887	100.0	+\$0.0232	+10.1
1890	619	83.4	+519	+83.8	58.19	101.1	-2.38	-4.1	.2848	98.6	+.0331	+11.6
1891	697	93.9	+441	+63.3	57.79	100.4	-1.98	-3.4	.2881	99.8	+.0298	+10.3
1892	634	85.4	+504	+78.6	57.51	99.9	-1.70	-3.0	.2855	98.9	+.0324	+11.3
1893	625	84.2	+513	+82.1	57.45	99.8	-1.64	-2.9	.2862	99.8	+.0297	+10.3
1894	614	82.7	+524	+85.3	57.37	99.7	-1.56	-2.7	.2904	100.6	+.0275	+9.5
1895	741	99.7	+39	+5.3	57.48	99.8	-1.67	-2.9	.2896	100.3	+.0283	+9.8
1896	724	97.6	+414	+57.2	57.64	100.1	-1.83	-3.2	.2859	99.0	+.0320	+11.2
1897	788	106.2	+350	+44.4	57.46	99.8	-1.65	-2.9	.2900	100.5	+.0279	+9.6
1898	884	119.1	+254	+27.4	57.27	99.5	-1.46	-2.5	.2901	100.5	+.0278	+9.6
1899	1,063	147.3	+45	+4.1	57.56	100.0	-1.75	-3.0	.2947	102.1	+.0252	+7.9
1900	1,070	144.2	+68	+6.4	57.47	99.8	-1.66	-2.9	.3013	104.4	+.0166	+5.5
1901	1,078	145.3	+60	+5.6	56.70	98.5	-1.6	-2.9	.3058	105.9	+.0121	+4.0
1902	1,039	140.0	+99	+9.5	56.32	97.8	-.51	- .9	.3157	109.4	+.0022	+.7
1903	1,138	153.4			55.81	96.9			.3179	110.1		

DRILLERS, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 2 establishments, 1890, 1895; 3 establishments, 1891, 1892, 1894, 1896-1898; 4 establishments, 1893, 1899-1903.]

Av. 1890-99.	15	100.0	+11	+73.3	59.44	100.0	-4.81	-8.1	\$0.1725	100.0	+\$0.0381	+22.1
1890	17	113.3	+9	+52.9	60.00	100.9	-5.37	-9.0	.1667	96.6	+.0439	+25.3
1891	10	66.7	+16	+160.0	59.00	99.3	-4.97	-7.4	.1593	92.3	+.0513	+32.2
1892	15	100.0	+11	+73.3	58.87	99.0	-4.24	-7.2	.1636	94.8	+.0470	+28.7
1893	13	86.7	+13	+100.0	58.87	99.0	-4.24	-7.2	.1639	95.0	+.0467	+28.5
1894	8	53.3	+18	+225.0	58.23	98.0	-3.60	-6.2	.1477	85.6	+.0629	+42.6
1895	10	66.7	+16	+160.0	60.00	100.9	-5.37	-9.0	.1608	98.2	+.0498	+31.0
1896	12	80.0	+14	+116.7	60.00	100.9	-5.37	-9.0	.1823	105.7	+.0283	+15.3
1897	23	153.3	+3	+13.0	60.00	100.9	-5.37	-9.0	.1847	107.1	+.0259	+14.0
1898	14	93.3	+12	+85.7	60.00	100.9	-5.37	-9.0	.1978	114.7	+.0128	+6.5
1899	27	180.0	-1	-3.7	59.39	99.9	-4.76	-8.0	.1978	114.7	+.0128	+6.5
1900	20	133.3	+6	+30.0	58.59	98.6	-3.96	-6.8	.1908	110.6	+.0198	+10.4
1901	21	140.0	+5	+28.8	56.51	95.1	-1.88	-3.3	.1912	110.8	+.0194	+10.1
1902	22	146.7	+4	+18.2	56.20	94.5	-1.57	-2.8	.2167	125.6	-.0061	-2.8
1903	26	173.3			54.63	91.9			.2106	122.1		

FITTERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages, from 6 establishments, 1890; 7 establishments, 1891-1895; 8 establishments, 1896, 1897; 9 establishments, 1898; 10 establishments, 1899-1903.]

Av. 1890-99.	129	100.0	+80	+62.0	59.07	100.0	-0.27	-0.5	\$0.2473	100.0	+\$0.0174	+7.0
1890	78	60.5	+131	+167.9	58.49	99.0	+.31	+.5	.2392	96.7	+.0255	+10.7
1891	123	95.3	+86	+69.9	59.20	100.2	-.40	-.7	.2296	92.8	+.0351	+15.3
1892	117	90.7	+92	+78.6	59.12	100.1	-.32	-.5	.2452	98.3	+.0215	+8.8
1893	115	89.1	+94	+81.7	58.97	99.8	-.17	-.3	.2455	99.3	+.0192	+7.8
1894	183	141.9	+26	+14.2	59.17	100.2	-.37	-.6	.2285	92.4	+.0362	+15.8
1895	138	107.0	+71	+51.4	59.47	100.7	-.67	-1.1	.2458	99.4	+.0189	+7.7
1896	134	103.9	+75	+56.0	59.43	100.6	-.63	-1.1	.2525	102.1	+.0122	+4.8
1897	113	87.6	+96	+85.0	59.00	99.9	-.20	-.3	.2610	105.5	+.0037	+1.4
1898	112	86.8	+97	+86.6	59.03	99.9	-.23	-.4	.2705	109.4	+.0058	+2.1
1899	172	133.3	+37	+21.5	58.83	99.3	-.03	-.1	.2576	104.2	+.0071	+2.8
1900	201	157.8	+72	+25.6	59.32	100.4	-.52	-.9	.2484	100.4	+.0163	+6.6
1901	247	191.5	+39	+15.4	58.26	98.6	+.54	+.9	.2560	103.5	+.0087	+3.4
1902	213	165.1	+4	+1.9	58.86	99.6	-.06	-.1	.2615	105.7	+.0032	+1.2
1903	209	162.0			58.80	99.5			.2647	107.0		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71.]

SHIPBUILDING—Continued.

JOINERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 12 establishments, 1890-1892, 1894, 1895; 13 establishments, 1893, 1896-1898; 14 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	347	100.0	+123	+35.4	58.07	100.0	-0.67	-1.2	\$0.2777	100.0	-\$0.0173	-6.2
1890	305	87.9	+165	+51.1	58.73	101.1	-1.33	-2.3	.2675	96.3	+.0275	+10.3
1891	238	68.6	+232	+77.5	57.70	99.4	-.30	-.5	.2768	99.5	+.0187	+6.7
1892	335	96.5	+135	+40.3	58.02	99.9	-.62	-1.1	.2754	99.2	+.0148	+5.3
1893	318	91.6	+152	+47.8	57.88	99.7	-.68	-1.2	.2802	100.9	+.0199	+7.2
1894	337	97.1	+133	+39.5	58.25	100.3	-.85	-1.5	.2751	99.1	+.0157	+5.7
1895	731	210.7	-261	-35.7	59.15	101.9	-1.75	-3.0	.2658	95.9	+.0247	+8.9
1896	330	95.1	+140	+42.4	57.99	99.9	-.59	-1.0	.2799	100.8	+.0151	+5.4
1897	162	46.7	+308	+190.1	56.58	97.4	+.82	+1.4	.2695	100.8	+.0015	+.5
1898	324	93.4	+146	+45.1	58.32	100.4	-.92	-1.6	.2688	100.8	+.0082	+2.9
1899	385	111.0	+85	+22.1	58.11	100.1	-.71	-1.2	.2731	98.3	+.0219	+7.9
1900	513	147.8	-43	-8.4	58.69	101.1	-1.29	-2.2	.2809	101.2	+.0141	+5.1
1901	501	144.4	-31	-6.2	58.25	100.3	-.85	-1.5	.2817	101.4	+.0133	+4.7
1902	520	149.9	-50	-9.6	58.06	100.0	-.66	-1.1	.2832	102.7	+.0098	+3.4
1903	470	135.4			57.40	98.8			.2950	106.2		

LABORERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1894; 4 establishments, 1895-1903.]

Av. 1890-99.	72	100.0	+68	+94.4	58.09	100.0	-0.61	-1.1	\$0.1677	100.0	+\$0.0170	+10.6
1890	148	205.6	-8	-5.4	58.99	101.5	-1.51	-2.6	.1421	84.7	+.0434	+26.5
1891	52	72.2	+80	+109.2	57.00	98.1	+.49	+.8	.1740	103.8	+.0115	+6.8
1892	61	84.7	+79	+109.5	57.54	99.1	-.06	-.1	.1631	97.3	+.0224	+13.7
1893	50	69.4	+90	+180.0	57.00	98.1	+.49	+.8	.1710	102.0	+.0145	+8.5
1894	53	73.6	+87	+164.2	57.17	98.4	+.31	+.5	.1711	103.8	+.0114	+6.7
1895	51	70.8	+89	+174.5	58.02	99.9	-.54	-.9	.1780	106.1	+.0075	+4.2
1896	46	63.9	+94	+204.3	58.83	101.3	-1.35	-2.3	.1702	101.5	+.0153	+9.0
1897	57	79.2	+83	+145.6	58.91	101.4	-1.43	-2.4	.1693	100.4	+.0172	+10.2
1898	75	104.2	+65	+86.7	58.52	100.7	-1.04	-1.8	.1693	100.4	+.0172	+10.2
1899	122	169.4	+18	+14.8	58.89	101.4	-1.41	-2.4	.1679	100.1	+.0176	+10.5
1900	207	287.5	-67	-32.4	58.80	101.2	-1.32	-2.2	.1674	99.8	+.0181	+10.8
1901	179	248.6	-39	-21.8	59.00	101.6	-1.52	-2.6	.1695	100.5	+.0170	+10.1
1902	169	234.7	-29	-17.2	57.43	98.9	+.06	+.1	.1816	108.3	+.0039	+2.1
1903	140	194.4			57.48	98.9			.1853	110.6		

MACHINISTS, Male.

[Data for employees from 8 establishments for entire period. Data for hours and wages from 8 establishments, 1890; 9 establishments, 1891-1898; 10 establishments, 1899-1903.]

Av. 1890-99.	497	100.0	+198	+100.2	59.50	100.0	-0.99	-1.7	\$0.2549	100.0	+\$0.0257	+10.1
1890	331	66.6	+464	+200.6	59.58	100.1	-1.07	-1.8	.2467	96.8	+.0339	+13.7
1891	333	67.0	+462	+198.8	59.58	100.1	-1.07	-1.8	.2491	97.7	+.0315	+12.6
1892	485	97.6	+510	+105.2	59.68	100.3	-1.17	-2.0	.2496	97.9	+.0311	+12.5
1893	451	90.7	+544	+120.6	59.67	100.3	-1.16	-1.9	.2496	97.5	+.0320	+12.9
1894	416	83.7	+549	+123.1	59.63	100.2	-1.12	-1.9	.2451	96.2	+.0354	+14.3
1895	517	104.0	+478	+92.5	59.48	100.0	-.97	-1.6	.2552	100.1	+.0254	+10.0
1896	518	104.2	+477	+92.1	59.39	99.8	-.98	-1.6	.2636	103.4	+.0170	+6.6
1897	519	104.4	+476	+91.9	59.26	99.6	-.75	-1.3	.2635	103.4	+.0171	+6.5
1898	546	109.9	+449	+84.2	59.22	99.5	-.71	-1.2	.2659	104.3	+.0147	+5.5
1899	824	165.8	+171	+29.8	59.51	100.0	-1.00	-1.7	.2613	102.5	+.0198	+7.4
1900	674	135.6	-321	-47.6	59.43	99.9	-.92	-1.5	.2698	105.8	+.0105	+4.0
1901	963	193.8	+32	+3.3	59.29	99.6	-.76	-1.3	.2669	105.1	+.0126	+4.7
1902	1,114	224.2	-149	-13.0	58.81	98.8	-.30	-.5	.2756	108.2	+.0049	+1.7
1903	995	200.2			58.51	98.3			.2806	110.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SHIPBUILDING—Continued.

MOLDERS, IRON, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890; 4 establishments, 1891-1898; 5 establishments, 1899-1901; 6 establishments, 1902, 1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	52	100.0	+11	+21.2	59.01	100.0	-1.11	-1.9	\$0.2570	100.0	+\$0.0402	+15.6
1890	50	96.2	+13	+26.0	59.10	100.2	-1.20	-2.0	.2710	105.4	+.0262	+9.7
1891	51	98.1	+12	+23.5	59.58	101.0	-1.68	-2.8	.2447	95.2	+.0525	+21.5
1892	51	98.1	+12	+23.5	59.34	100.6	-1.44	-2.4	.2494	97.0	+.0478	+19.2
1893	44	84.6	+19	+43.2	59.28	100.5	-1.38	-2.3	.2539	98.8	+.0433	+17.1
1894	38	73.1	+25	+65.8	58.84	99.7	-.94	-1.6	.2464	95.9	+.0508	+20.6
1895	49	94.2	+14	+28.6	59.88	99.8	-.98	-1.7	.2561	99.6	+.0411	+16.0
1896	58	111.5	+5	+8.6	58.87	99.8	-.97	-1.6	.2499	97.2	+.0473	+18.9
1897	51	98.1	+12	+23.5	58.58	99.3	-.68	-1.2	.2656	103.3	+.0317	+11.9
1898	60	115.4	+3	+5.0	58.87	99.8	-.97	-1.6	.2629	102.3	+.0343	+13.0
1899	64	123.1	-1	-1.6	58.79	99.6	-.89	-1.5	.2690	105.0	+.0273	+7.5
1900	57	109.6	+6	+10.5	58.82	99.7	-.92	-1.6	.2764	107.5	+.0208	+7.1
1901	61	117.3	+2	+3.3	58.76	99.6	-.86	-1.5	.2831	110.2	+.0141	+5.0
1902	66	126.9	-3	-4.5	57.97	98.2	-.07	-.1	.2892	112.5	+.0080	+2.8
1903	63	121.2			57.90	98.1			.2972	115.6		

PAINTERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 9 establishments, 1890; 11 establishments, 1891-1894, 1899-1903; 10 establishments, 1895-1898.]

Av. 1890-99.	208	100.0	+66	+31.7	57.34	100.0	-1.26	-2.2	\$0.2756	100.0	+\$0.0073	+2.6
1890	163	78.4	+111	+68.1	59.11	103.1	-3.02	-5.1	.2621	95.1	+.0208	+7.9
1891	163	78.4	+111	+68.1	58.71	102.4	-2.62	-4.5	.2584	93.8	+.0245	+9.5
1892	177	85.1	+97	+54.8	58.70	102.4	-2.61	-4.4	.2617	95.0	+.0212	+8.1
1893	234	112.5	+40	+17.1	58.96	102.8	-2.87	-4.9	.2738	99.3	+.0091	+3.3
1894	213	102.4	+61	+28.6	58.88	102.7	-2.79	-4.7	.2708	98.3	+.0121	+4.5
1895	322	154.8	-48	-14.9	57.30	99.9	-1.21	-2.1	.2911	105.6	+.0082	-2.8
1896	202	97.1	+72	+35.6	55.99	97.6	+.10	+2	.2914	105.7	+.0085	-2.9
1897	174	83.7	+100	+57.5	54.34	94.8	+1.75	+3.2	.2909	105.6	+.0080	-2.8
1898	210	101.0	+64	+30.5	55.45	96.7	+.64	+1.2	.2830	102.7	+.0001	-.04
1899	226	108.7	+48	+21.2	55.94	97.6	+.15	+3	.2728	99.0	+.0101	+3.7
1900	275	132.2	-1	-.4	56.73	98.9	-.64	-1.1	.2797	101.5	+.0032	+1.1
1901	272	130.8	+2	+7	56.43	98.4	-.34	-.6	.2797	101.5	+.0032	+1.1
1902	279	134.1	-5	-1.7	55.64	97.0	+.45	+8	.2846	103.3	+.0017	-.6
1903	274	131.7			56.09	97.8			.2829	102.6		

PATTERN MAKERS, Male.

[Data for employees from 8 establishments for entire period. Data for hours and wages from 8 establishments, 1890; 9 establishments, 1891-1898, 10 establishments, 1899-1903.]

Av. 1890-99.	76	100.0	+33	+43.4	59.59	100.0	-1.61	-2.7	\$0.2789	100.0	+\$0.0398	+14.3
1890	46	60.5	+63	+137.0	59.54	99.9	-1.56	-2.6	.2870	102.9	+.0317	+11.0
1891	62	81.6	+47	+75.8	59.72	100.2	-1.74	-2.9	.2727	97.8	+.0460	+16.9
1892	63	82.9	+46	+73.0	59.72	100.2	-1.74	-2.9	.2724	97.7	+.0463	+17.0
1893	64	84.2	+45	+70.3	59.73	100.2	-1.75	-2.9	.2730	97.9	+.0457	+16.7
1894	77	101.3	+32	+41.6	59.72	100.2	-1.74	-2.9	.2658	95.3	+.0529	+19.9
1895	87	114.3	+22	+25.3	59.60	100.0	-1.62	-2.7	.2807	100.6	+.0380	+13.5
1896	97	127.6	+12	+12.4	59.64	100.1	-1.66	-2.8	.2783	99.8	+.0404	+14.5
1897	76	100.0	+33	+43.4	59.82	99.5	-1.34	-2.3	.2864	102.7	+.0323	+11.3
1898	84	110.5	+25	+29.8	59.47	99.8	-1.49	-2.5	.2810	100.8	+.0377	+13.4
1899	103	135.5	+6	+5.8	59.42	93.7	-1.44	-2.4	.2912	104.4	+.0275	+9.4
1900	99	130.3	+10	+14.7	59.52	99.9	-1.54	-2.6	.2984	107.0	+.0203	+6.8
1901	95	125.0	+14	+10.1	59.03	99.1	-1.05	-1.8	.3057	109.6	+.0130	+4.3
1902	108	142.1	-1	-.9	58.64	98.4	-.66	-1.1	.3126	112.1	+.0061	+2.0
1903	109	143.4			57.98	97.3			.3187	114.3		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

SHIPBUILDING—Continued.

RIGGERS, Male.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 5 establishments, 1890; 8 establishments, 1891-1898; 9 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	100	100.0	+128	+128.0	67.44	100.0	+1.69	+1.9	\$0.2551	100.0	-\$0.0018	-0.7
1890	79	79.0	+149	+188.6	57.27	99.7	+1.26	+2.2	.2659	112.1	-.0026	-1.0
1891	70	70.0	+158	+225.7	56.33	98.1	+2.20	+3.9	.2705	106.0	-.0172	-6.8
1892	100	100.0	+128	+128.0	56.79	98.9	+1.74	+3.1	.2587	101.4	-.0054	-2.1
1893	119	119.0	+109	+91.6	57.63	100.3	+ .90	+1.6	.2423	95.0	+.0116	+4.5
1894	115	115.0	+113	+98.3	57.83	100.7	+ .70	+1.2	.2216	86.9	+.0317	+12.3
1895	110	110.0	+118	+107.3	57.92	100.8	+ .61	+1.1	.2369	92.9	+.0164	+6.9
1896	71	71.0	+157	+221.1	57.66	100.4	+ .87	+1.5	.2605	102.1	-.0072	-2.9
1897	54	54.0	+174	+322.2	57.22	99.6	+1.31	+2.3	.2762	108.3	-.0229	-9.2
1898	94	94.0	+134	+142.6	57.51	100.1	+1.02	+1.8	.2658	104.2	-.0125	-4.7
1899	184	184.0	+44	+23.9	58.23	101.4	+ .30	+ .5	.2322	91.0	+.0211	+8.1
1900	244	244.0	-16	-6.6	58.59	102.0	-.06	-.1	.2272	89.2	+.0258	+11.4
1901	98	98.0	+130	+132.7	57.39	99.9	+1.14	+2.0	.2588	99.5	-.0005	-.2
1902	242	242.0	-14	-5.8	58.58	102.0	-.05	-.1	.2421	94.9	+.0112	+4.6
1903	228	228.0			58.53	101.9			.2533	99.3		

RIVETERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 4 establishments, 1890, 1894, 1895; 5 establishments, 1891-1893, 1896-1898; 6 establishments, 1899-1903.]

Av. 1890-99.	69	100.0	+119	+215.9	59.35	100.0	-0.58	-1.0	\$0.2364	100.0	+\$0.0167	+7.1
1890	40	58.0	+178	+445.0	60.00	101.1	-1.23	-2.1	.1936	81.9	+.0565	+69.7
1891	95	137.7	+123	+129.5	59.69	100.6	-.92	-1.5	.1993	84.3	+.0538	+23.0
1892	107	155.1	+111	+103.7	59.67	100.5	-.90	-1.5	.2187	92.5	+.0344	+15.7
1893	11	15.9	+207	+1841.8	58.43	98.4	+ .34	+ .6	.2227	94.2	+.0304	+13.7
1894	10	14.5	+208	+2080.0	58.45	98.5	+ .32	+ .5	.2014	85.2	+.0517	+25.7
1895	8	11.6	+210	+2625.0	59.31	99.9	-.54	-.9	.3029	128.1	-.0498	-19.4
1896	16	23.2	+202	+1262.5	59.43	100.1	-.66	-1.1	.2534	107.2	-.0005	-.1
1897	19	27.5	+199	+1047.4	59.29	99.9	-.52	-.9	.2792	118.1	-.0261	-9.7
1898	171	247.8	+47	+27.5	59.74	100.7	-.97	-1.6	.2453	103.8	-.0078	-3.2
1899	208	301.4	+10	+4.8	59.49	100.2	-.72	-1.2	.2476	104.7	-.0035	-1.3
1900	146	211.6	+72	+49.3	59.46	100.2	-.69	-1.2	.2452	103.7	-.0079	-3.2
1901	229	331.9	-11	-4.8	59.20	99.7	-.43	-.7	.2229	94.3	+.0302	+13.5
1902	191	281.2	+24	+12.4	58.68	98.9	-.69	-1.2	.2394	107.2	-.0005	-.1
1903	218	315.9			58.77	99.0			.2531	107.1		

SAWYERS, CIRCULAR, Male.

[Data from 5 establishments.]

Av. 1890-99.	9	100.0	+1	+11.1	55.31	100.0	-3.71	-6.7	\$0.2925	100.0	+\$0.0238	+8.1
1890	7	77.8	+3	+42.9	57.43	103.8	-5.83	-10.2	.2737	93.6	+.0386	+14.5
1891	9	100.0	+1	+11.1	57.33	103.7	-5.73	-10.0	.2829	96.7	+.0304	+10.7
1892	8	88.9	+2	+25.0	57.00	103.1	-5.40	-9.5	.2808	96.0	+.0325	+11.6
1893	9	100.0	+1	+11.1	57.33	103.7	-5.73	-10.0	.2829	96.7	+.0304	+10.7
1894	9	100.0	-1	-11.1	54.00	97.6	-2.40	-4.4	.3015	103.1	-.0118	-4.3
1895	9	100.0	-1	-11.1	54.00	97.6	-2.40	-4.4	.3015	103.1	-.0118	-4.3
1896	8	88.9	+2	+25.0	54.00	97.6	-2.40	-4.4	.2975	101.7	-.0158	-5.3
1897	9	100.0	-1	-11.1	54.00	97.6	-2.40	-4.4	.3015	103.1	-.0118	-4.3
1898	9	100.0	-1	-11.1	54.00	97.6	-2.40	-4.4	.3015	103.1	-.0118	-4.3
1899	9	100.0	+1	+11.1	54.00	97.6	-2.40	-4.4	.3015	103.1	-.0118	-4.3
1900	8	88.9	+2	+25.0	54.00	97.6	-2.40	-4.4	.2975	101.7	-.0158	-5.3
1901	9	100.0	-1	-11.1	51.78	93.6	-.18	-.3	.3163	108.1	-.0020	-.8
1902	9	100.0	-1	-11.1	51.78	93.6	-.18	-.3	.3235	110.6	-.0102	-3.8
1903	10	111.1			51.60	93.3			.3137	107.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SHIPBUILDING—Concluded.

SPAR MAKERS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	23	100.0	-2	- 8.7	57.21	100.0	-3.21	-5.6	\$0.3557	100.0	-\$0.0091	- 2.6
1890	25	104.7	-4	-16.0	57.60	100.7	-3.60	-6.8	.3892	109.4	-.0426	-10.9
1891	24	104.3	-3	-12.5	56.50	98.8	-2.50	-4.4	.3884	109.2	-.0418	-10.8
1892	24	104.3	-3	-12.5	57.00	99.6	-3.00	-5.3	.3775	106.1	-.0309	- 8.2
1893	26	113.0	-5	-19.2	57.23	100.0	-3.23	-5.6	.3610	101.5	-.0144	- 4.0
1894	20	87.0	+1	+ 5.0	57.60	100.7	-3.60	-6.3	.3294	92.6	+.0172	+ 5.2
1895	21	91.3			57.43	100.4	-3.43	-6.0	.3283	92.3	+.0183	+ 5.6
1896	21	91.3			57.43	100.4	-3.43	-6.0	.3307	93.0	+.0159	+ 4.8
1897	20	87.0	+1	+ 5.0	57.30	100.2	-3.30	-5.8	.3322	93.4	+.0144	+ 4.3
1898	23	100.0	-2	- 8.7	56.87	99.4	-2.87	-5.0	.3614	101.6	-.0148	- 4.1
1899	23	100.0	-2	- 8.7	57.13	99.9	-3.13	-5.5	.3589	100.9	-.0123	- 3.4
1900	24	104.3	-3	-12.5	57.25	100.1	-3.25	-5.7	.3461	97.3	+.0005	+ .1
1901	25	108.7	-4	-16.0	57.12	99.8	-3.12	-5.5	.3564	100.2	-.0098	- 2.7
1902	24	104.3	-3	-12.5	57.00	99.6	-3.00	-5.3	.3567	100.3	-.0101	- 2.8
1903	21	91.3			54.00	94.4			.3466	97.4		

SILK GOODS.

BEAMERS, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 2 establishments, 1890-1896; 3 establishments, 1897-1903.]

Av. 1890-99.	4	100.0	+1	+25.0	57.68	100.0	-0.82	-1.4	\$0.1795	100.0	+\$0.0024	+ 1.3
1890	4	100.0	+1	+25.0	60.00	104.0	-0.14	-5.2	.1875	104.5	+.0056	+ 3.0
1891	4	100.0	+1	+25.0	60.00	104.0	-0.14	-5.2	.1792	99.8	+.0027	+ 1.5
1892	3	75.0	+2	+66.7	60.00	104.0	-0.14	-5.2	.1833	102.1	-.0014	- .8
1893	3	75.0	+2	+66.7	56.67	98.2	+ .19	+ .3	.1833	102.1	-.0014	- .8
1894	3	75.0	+2	+66.7	56.67	98.2	+ .19	+ .3	.1833	102.1	-.0014	- .8
1895	4	100.0	+1	+25.0	56.25	97.5	+ .61	+1.1	.1792	99.8	+.0027	+ 1.5
1896	3	75.0	+2	+66.7	56.67	98.2	+ .19	+ .3	.1833	102.1	-.0014	- .8
1897	4	100.0	+1	+25.0	56.80	98.5	+ .06	+ .1	.1669	93.0	+.0150	+ 9.0
1898	3	75.0	+2	+66.7	57.60	99.9	-.74	-1.3	.1579	88.0	+.0240	+15.2
1899	9	225.0	-4	-44.4	56.18	97.4	+ .68	+1.2	.1914	106.6	+.0095	+ 5.0
1900	3	75.0	+2	+66.7	57.60	99.9	-.74	-1.3	.1673	93.2	+.0146	+ 8.7
1901	6	150.0	-1	-16.7	56.63	98.2	+ .23	+ .4	.1805	100.6	+.0014	+ .8
1902	4	100.0	+1	+25.0	57.17	99.1	-.31	-.5	.1799	100.2	+.0020	+ 1.1
1903	5	125.0			56.86	98.6			.1819	101.3		

DOUBLERS, Female.

[Data from 6 establishments.]

Av. 1890-99.	83	100.0	- 8	- 9.6	58.36	100.0	-1.15	-2.0	\$0.0796	100.0	+\$0.0186	+23.4
1890	64	77.1	+11	+17.2	60.00	102.8	-2.79	-4.7	.0832	107.0	+.0130	+15.3
1891	65	79.3	+10	+15.4	60.00	102.8	-2.79	-4.7	.0785	98.6	+.0197	+25.1
1892	82	98.8	- 7	- 8.6	59.63	102.2	-2.42	-4.1	.0793	99.6	+.0189	+23.8
1893	95	114.5	-20	-21.1	57.60	98.7	-.39	-.7	.0783	98.4	+.0199	+25.4
1894	90	108.4	-15	-16.7	57.38	98.3	-.17	-.3	.0810	101.8	+.0172	+21.2
1895	77	92.8	- 2	- 2.6	57.60	98.7	-.39	-.7	.0816	102.5	+.0166	+20.3
1896	84	101.2	- 9	-10.7	57.58	98.7	-.37	-.6	.0812	102.0	+.0170	+20.9
1897	86	106.0	-13	-14.8	57.97	99.3	-.76	-1.3	.0760	95.5	+.0222	+29.2
1898	93	112.0	-18	-19.4	57.81	99.1	-.60	-1.0	.0779	97.9	+.0203	+26.1
1899	89	107.2	-14	-15.7	58.02	99.4	-.81	-1.4	.0766	96.2	+.0216	+28.2
1900	83	100.0	- 8	- 9.6	57.96	99.3	-.75	-1.3	.0772	97.0	+.0210	+27.2
1901	83	100.0	- 8	- 9.6	57.71	98.9	-.50	-.9	.0851	106.9	+.0131	+15.4
1902	74	89.2	+ 1	+ 1.4	57.80	99.0	-.59	-1.0	.0910	114.3	+.0072	+ 7.9
1903	75	90.4			57.21	98.0			.0982	123.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SILK GOODS—Continued.

DYERS, Male.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	104	100.0	+262	+251.9	58.17	100.0	-3.02	-5.2	\$0.2138	100.0	+\$0.0066	+3.1
1890.	76	73.1	+290	+381.6	60.00	103.1	-4.85	-8.1	.2079	97.2	+.0125	+5.8
1891.	96	92.3	+270	+281.3	60.00	103.1	-4.85	-8.1	.2054	96.1	+.0150	+7.0
1892.	106	101.9	+260	+245.3	60.00	103.1	-4.85	-8.1	.2033	95.1	+.0171	+8.4
1893.	91	87.5	+275	+302.2	60.00	103.1	-4.85	-8.1	.1980	92.6	+.0224	+11.2
1894.	89	85.6	+277	+311.2	57.42	98.7	-2.27	-4.0	.2158	100.9	+.0046	+2.1
1895.	101	97.1	+265	+262.4	57.13	98.2	-1.98	-3.5	.2181	102.0	+.0023	+1.1
1896.	102	98.1	+264	+258.8	56.96	97.9	-1.81	-3.2	.2205	103.1	+.0001	-.1
1897.	137	131.7	+229	+167.2	56.39	96.9	-1.24	-2.2	.2279	106.6	+.0075	+3.5
1898.	124	119.2	+242	+195.2	56.94	97.9	-1.79	-3.1	.2187	102.3	+.0017	-.8
1899.	122	117.3	+244	+200.0	56.89	97.8	-1.74	-3.1	.2224	104.0	+.0029	+1.3
1900.	114	109.6	+252	+221.1	57.06	98.1	-1.91	-3.3	.2250	105.8	+.0016	-.7
1901.	143	137.5	+223	+155.9	56.64	97.4	-1.49	-2.6	.2250	105.2	+.0046	+2.1
1902.	400	384.6	-34	-8.5	55.15	94.8			.2184	102.2	+.0020	+0.9
1903.	366	351.9			55.15	94.8			.2204	103.1		

LOOM FIXERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	23	100.0	+9	+39.1	56.57	100.0	-0.79	-1.4	\$0.2875	100.0	+\$0.0085	+3.0
1890.	16	69.6	+16	+100.0	52.06	104.4	-3.28	-5.6	.2724	94.7	+.0246	+9.9
1891.	17	73.9	+15	+88.2	50.12	104.5	-3.34	-5.6	.2696	93.8	+.0274	+10.2
1892.	20	87.0	+12	+68.0	57.50	101.6	-1.72	-3.0	.2771	96.4	+.0199	+7.0
1893.	19	82.6	+13	+68.4	55.79	98.6	-1.01	-.02	.2846	99.0	+.0124	+4.4
1894.	22	95.7	+10	+45.5	55.68	98.4	+1.0	+2	.2810	97.7	+.0160	+5.7
1895.	27	117.4	+5	+18.4	55.56	98.2	+2.2	+4	.2990	103.7	+.0010	-.4
1896.	25	108.7	+7	+28.0	55.80	98.6	-.02	-.04	.2905	101.0	+.0065	+2.2
1897.	29	126.1	+3	+10.3	55.69	98.4	+1.0	+2	.2997	104.2	+.0077	+2.9
1898.	30	130.4	+2	+6.7	55.67	98.4	+1.1	+2	.3023	105.1	+.0058	+2.1
1899.	29	126.1	+3	+10.3	55.86	98.7	-.08	-1	.3000	104.3	+.0030	+1.1
1900.	35	152.2	-3	-8.6	55.71	98.5	+1.07	+1	.3062	106.2	+.0042	+1.9
1901.	33	143.5	-1	-3.0	55.76	98.6	+1.02	+1	.3028	105.5	+.0058	+2.1
1902.	33	143.5	-1	-3.0	55.76	98.6	+1.02	+1	.2962	103.0	+.0008	-.3
1903.	32	139.1			55.78	98.6			.2970	103.8		

PICKERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	3	100.0	+1	+33.3	60.00	100.0			\$0.2330	100.0	+\$0.0455	+19.5
1890.	2	66.7	+2	+100.0	60.00	100.0			.2555	109.7	+.0228	+9.8
1891.	4	133.3			60.00	100.0			.2602	111.7	+.0181	+7.8
1892.	3	100.0	+1	+33.3	60.00	100.0			.2597	98.6	+.0480	+21.2
1893.	3	100.0	-1	-33.3	60.00	100.0			.1961	84.2	+.0822	+41.9
1894.	3	100.0	+1	+33.3	60.00	100.0			.2256	96.8	+.0527	+25.4
1895.	3	100.0	+1	+33.3	60.00	100.0			.2428	104.2	+.0355	+15.6
1896.	3	100.0	-1	-33.3	60.00	100.0			.1919	82.8	+.0864	+45.0
1897.	3	100.0	-1	-33.3	60.00	100.0			.2185	94.2	+.0598	+28.5
1898.	4	133.3			60.00	100.0			.2576	110.6	+.0307	+13.0
1899.	4	133.3			60.00	100.0			.2509	107.7	+.0274	+12.8
1900.	4	133.3			60.00	100.0			.2585	111.4	+.0188	+8.2
1901.	4	133.3			60.00	100.0			.2507	107.3	+.0283	+11.7
1902.	4	133.3			60.00	100.0			.2588	111.5	+.0185	+8.1
1903.	4	133.3			60.00	100.0			.2783	119.4		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SILK GOODS—Continued.

PICKERS, Female.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	31	100.0	+19	+ 61.3	60.00	100.0	.....	.....	\$0.1009	100.0	+\$0.0234	+23.2
1890	15	48.4	+35	+233.3	60.00	100.0	.....	.....	.0857	84.9	+.0386	+45.0
1891	19	61.3	+31	+163.2	60.00	100.0	.....	.....	.1096	108.6	+.0147	+13.4
1892	22	71.0	+28	+127.3	60.00	100.0	.....	.....	.1209	119.8	+.0084	+2.8
1893	21	67.7	+29	+138.1	60.00	100.0	.....	.....	.1092	108.2	+.0151	+13.8
1894	26	83.9	+24	+92.3	60.00	100.0	.....	.....	.0988	97.9	+.0255	+25.8
1895	32	103.2	+18	+56.3	60.00	100.0	.....	.....	.1018	100.9	+.0225	+22.1
1896	33	106.5	+17	+51.5	60.00	100.0	.....	.....	.0909	80.2	+.0434	+53.6
1897	42	135.5	+8	+19.0	60.00	100.0	.....	.....	.0940	93.2	+.0308	+32.2
1898	45	145.2	+5	+11.1	60.00	100.0	.....	.....	.1024	101.5	+.0219	+21.4
1899	52	167.7	-2	-3.8	60.00	100.0	.....	.....	.1057	104.8	+.0186	+17.6
1900	48	154.8	+2	+4.2	60.00	100.0	.....	.....	.1082	107.2	+.0161	+14.9
1901	55	177.4	-5	-9.2	60.00	100.0	.....	.....	.1081	107.1	+.0162	+15.0
1902	59	190.3	-9	-15.3	60.00	100.0	.....	.....	.1048	103.9	+.0196	+18.6
1903	50	161.3	.....	.....	60.00	100.0	.....	.....	.1243	123.2	.....	.....

QUILLERS, Female.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 6 establishments, 1890-1896; 7 establishments, 1897-1903.]

Av. 1890-99.	91	100.0	+24	+26.4	57.26	100.0	-0.75	-1.3	\$0.0917	100.0	+\$0.0072	+7.9
1890	74	81.3	+41	+55.4	59.57	104.0	-3.06	-5.1	.0945	103.1	+.0044	+4.7
1891	65	71.4	+50	+76.9	59.23	103.4	-2.72	-4.6	.0912	99.5	+.0077	+8.4
1892	76	83.5	+39	+51.3	58.36	101.9	-1.85	-3.2	.0869	94.8	+.0120	+13.8
1893	79	86.8	+36	+45.6	56.33	98.4	+.18	+.3	.0960	104.7	+.0029	+3.0
1894	80	87.9	+35	+43.8	56.19	98.1	+.32	+.6	.0883	96.3	+.0106	+12.0
1895	129	141.8	-14	-10.9	56.05	97.9	+.46	+.8	.0893	97.4	+.0096	+10.8
1896	78	85.7	+37	+57.4	56.41	98.5	+.10	+.2	.1007	109.8	+.0018	+1.8
1897	101	111.0	+14	+13.9	56.85	99.3	-.34	-.6	.0910	99.2	+.0079	+8.7
1898	108	118.7	+7	+6.5	56.68	99.0	-.17	-.3	.0910	99.2	+.0079	+8.7
1899	116	127.5	-1	-.9	56.92	99.4	-.41	-.7	.0877	95.6	+.0112	+12.8
1900	105	115.4	+10	+9.5	57.17	99.8	-.66	-1.2	.0879	95.9	+.0110	+12.5
1901	121	133.0	-6	-5.0	56.89	99.4	-.38	-.7	.0884	96.4	+.0105	+11.2
1902	116	127.5	-1	-.9	56.85	99.3	-.34	-.6	.0895	97.6	+.0094	+10.5
1903	115	126.4	.....	.....	56.51	98.7	.....	.....	.0989	107.9	.....	.....

SPINNERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	85	100.0	+81	+95.3	58.44	100.0	-0.12	-0.2	\$0.0754	100.0	+\$0.0040	+5.3
1890	45	52.9	+121	+268.9	60.00	102.7	-1.68	-2.8	.0778	103.2	+.0016	+2.1
1891	60	70.6	+106	+176.7	60.00	102.7	-1.68	-2.8	.0708	93.9	+.0086	+12.1
1892	79	92.9	+87	+110.1	58.48	100.1	-.16	-.3	.0753	99.9	+.0041	+5.4
1893	104	122.4	+62	+69.6	57.97	99.2	+.35	+.6	.0743	98.5	+.0051	+6.9
1894	76	89.4	+90	+118.4	58.17	99.5	+.15	+.3	.0723	95.9	+.0071	+9.8
1895	96	112.9	+70	+72.9	57.79	98.9	+.53	+.9	.0752	99.7	+.0042	+5.6
1896	80	94.1	+86	+107.6	57.89	99.1	+.43	+.7	.0780	103.4	+.0014	+1.8
1897	90	105.9	+76	+84.4	57.86	99.0	+.46	+.8	.0787	104.4	+.0007	-.9
1898	110	129.4	+56	+50.9	58.05	99.3	+.27	+.5	.0752	99.7	+.0042	+5.6
1899	105	123.5	+61	+58.1	58.23	99.6	+.09	+.2	.0765	101.5	+.0029	+3.8
1900	129	151.8	+37	+28.7	58.34	99.8	-.02	-.03	.0733	97.2	+.0061	+8.3
1901	122	143.5	+44	+36.1	58.39	99.9	-.07	-.1	.0794	105.3	.....	.....
1902	156	183.5	+10	+6.4	58.31	99.8	+.01	+.02	.0779	103.3	+.0015	+1.9
1903	166	196.3	.....	.....	58.32	99.8	.....	.....	.0794	105.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 715.]

SILK GOODS—Continued.

TWISTERS-IN, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per-cent.			Num-ber.	Per-cent.			Amount.	Per-cent.
Av. 1890-99.	24	100.0	-3	-12.5	56.50	100.0	-1.50	-2.7	\$0.2529	100.0	\$0.0085	-4
1890	16	66.7	-5	-31.3	60.00	106.2	-5.00	-8.3	.2484	98.2	.0130	-3
1891	12	50.0	+9	+75.0	60.00	106.2	-5.00	-8.3	.2535	100.2	.0079	-1
1892	26	83.3	+1	+5.0	60.00	106.2	-5.00	-8.3	.2542	100.5	.0072	-2
1893	22	91.7	-1	-4.5	55.00	97.3			.2471	97.7	.0143	-5
1894	19	79.2	+2	+10.5	55.00	97.3			.2634	104.2	.0020	-
1895	12	50.0	+9	+75.0	55.00	97.3			.2651	104.8	.0037	-1
1896	51	225.0	-33	-61.1	55.00	97.3			.2501	98.9	.0113	-4
1897	38	158.3	-17	-44.7	55.00	97.3			.2566	102.3	.0028	-1
1898	26	83.3	+1	+5.0	55.00	97.3			.2407	95.2	.0237	-6
1899	21	100.0	-3	-12.5	55.00	97.3			.2479	98.0	.0135	-5
1900	20	83.3	+1	+5.0	55.00	97.3			.2594	102.6	.0020	-
1901	35	145.8	-14	-40.0	55.00	97.3			.2210	87.4	.0404	-18
1902	35	145.8	-14	-40.0	55.00	97.3			.2533	100.2	.0081	-2
1903	21	87.5			55.00	97.3			.2614	103.4		

WARPERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	36	100.0	+5	+13.9	56.08	100.0	-1.08	-1.9	\$0.2416	100.0	\$0.0300	-12
1890	31	86.1	+10	+32.3	59.03	105.3	-4.03	-6.8	.2250	93.1	.0466	-3
1891	33	91.7	+8	+24.2	59.00	105.4	-1.09	-6.9	.2169	90.6	.0527	-24
1892	35	97.2	+6	+17.1	57.71	102.9	-2.71	-4.7	.2366	97.9	.0350	-14
1893	27	75.0	+14	+51.9	55.09	98.1			.2425	100.4	.0291	-12
1894	42	116.7	-1	-2.4	55.00	98.1			.2366	98.8	.0470	-12
1895	58	161.3	-7	-14.6	55.00	98.1			.2661	110.1	.0355	-2
1896	32	88.9	+9	+28.1	55.00	98.1			.2339	96.8	.0377	-16
1897	41	122.2	-3	-6.8	55.00	98.1			.2670	110.5	.0046	-1
1898	40	111.1	-1	-2.5	55.00	98.1			.2538	105.0	.0178	-7
1899	28	77.8	-13	-36.4	55.00	98.1			.2458	101.7	.0258	-10
1900	50	89.3	-11	-36.7	55.00	98.1			.2697	111.6	.0019	-
1901	37	102.8	-4	-10.8	55.00	98.1			.2810	116.3	.0094	-3
1902	41	122.2	3	6.8	55.00	98.1			.2666	122.8	.0250	-4
1903	41	113.9			55.00	98.1			.2716	112.4		

WARPERS, Female.

[Data from 7 employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890-1903; 6 establishments, 1897-1903.]

Av. 1890-99.	112	100.0	-19	-17.0	58.17	100.0			\$0.1726	100.0	\$0.0157	-4
1890	101	90.2	-20	-23.7	60.00	103.1	-1.83	-3.1	.1658	96.1	.0089	-5
1891	113	100.9	-18	-15.9	60.00	103.1	-1.83	-3.1	.1529	88.6	.0040	-24
1892	111	101.8	-17	-14.9	60.00	103.1	-1.83	-3.1	.1685	97.6	.0011	-1
1893	93	83.0	-38	-43.9	57.26	98.4	-1.91	-1.6	.1791	103.8	.0222	-12
1894	97	86.6	-34	-37.1	56.91	97.8	-1.26	-2.2	.1800	104.3	.0231	-12
1895	112	100.0	-19	-17.0	57.57	98.6	-1.80	-1.4	.1828	105.6	.0254	-13
1896	114	101.8	-17	-14.9	57.21	98.4	-1.80	-1.6	.1815	111.0	.0347	-18
1897	127	113.4	-14	-11.1	57.58	98.6	-1.79	-1.4	.1926	105.7	.0256	-14
1898	133	118.8	-2	-1.5	57.55	99.3	-1.42	-1.7	.1767	90.8	.0002	-
1899	115	102.7	-16	-13.9	57.78	99.3	-1.39	-1.7	.1666	96.8	.0097	-5
1900	118	105.4	-13	-11.0	58.23	100.1	-1.06	-1.1	.1553	90.0	.0016	-1
1901	118	105.4	-13	-11.0	58.20	100.2	-1.15	-1.2	.1524	89.3	.0045	-5
1902	128	114.3	-3	-2.3	58.12	99.9	-1.05	-1.1	.1629	94.4	.0000	-
1903	131	117.0			58.17	100.0			.1709	90.9		

TABLE I.—WAGES AND HOURS OF LABOR, 1880-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SILK GOODS—Continued.

WEAVERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890; 4 establishments, 1891-1896; 5 establishments, 1897-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	212	100.0	- 82	-38.7	56.41	100.0	+0.18	+0.3	\$0.1699	100.0	-\$0.0097	- 5.7
1890	296	139.6	-166	-56.1	58.03	102.9	-1.44	-2.5	.1625	95.6	-.0023	- 1.4
1891	172	81.1	- 42	-24.4	58.47	103.7	-1.88	-3.2	.1665	98.0	-.0063	- 3.8
1892	207	97.6	- 77	-37.2	57.03	101.1	- .44	- .8	.1713	102.6	-.0141	- 8.1
1893	180	84.9	- 50	-27.8	55.42	98.2	+1.17	+2.1	.1798	105.8	-.0196	-10.9
1894	197	92.9	- 67	-34.0	55.39	98.2	+1.20	+2.2	.1719	101.2	-.0117	- 6.8
1895	218	102.8	- 88	-40.4	55.47	98.3	+1.12	+2.0	.1653	97.3	-.0051	- 3.1
1896	164	77.4	- 84	-20.7	55.34	98.1	+1.25	+2.3	.1899	111.2	-.0287	-15.2
1897	214	100.9	- 34	-39.3	56.01	99.3	+ .58	+1.0	.1664	97.9	-.0062	- 3.7
1898	234	110.4	-104	-44.4	56.45	100.1	+ .14	+ .2	.1623	95.5	-.0021	- 1.3
1899	235	110.8	-105	-44.7	56.51	100.2	+ .08	+ .1	.1608	94.6	-.0006	- .4
1900	185	87.3	- 55	-29.7	56.54	100.2	+ .05	+ .1	.1680	98.9	-.0078	- 4.6
1901	177	83.5	- 47	-26.6	56.74	100.6	- .15	- .3	.1542	90.8	-.0060	+ 3.9
1902	162	76.4	- 32	-19.8	56.90	100.9	- .31	- .5	.1654	97.4	-.0052	- 3.1
1903	130	61.3			56.59	100.3			.1602	94.3		

WEAVERS, Female.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 6 establishments, 1890-1896; 7 establishments, 1897-1903.]

Av. 1890-99.	408	100.0	+221	+54.2	58.14	100.0	-0.15	-0.3	\$0.1550	100.0	-\$0.0016	- 1.0
1890	340	83.3	+501	+147.4	58.60	100.8	- .61	-1.0	.1482	95.6	-.0062	+ 3.5
1891	268	65.7	+573	+213.8	59.32	102.0	-1.33	-2.2	.1393	89.9	-.0141	+10.1
1892	351	86.0	+490	+139.6	58.46	100.6	- .47	- .8	.1559	100.6	-.0025	- 1.6
1893	350	85.8	+491	+140.3	57.37	98.7	+ .61	+1.1	.1631	105.2	-.0097	- 5.9
1894	407	99.8	+434	+106.6	57.58	99.0	+ .41	+ .7	.1721	111.0	-.0187	-10.9
1895	454	111.3	+387	+85.2	57.37	98.7	+ .62	+1.1	.1563	101.0	-.0222	- 2.0
1896	425	104.2	+416	+97.9	58.25	100.2	- .26	- .4	.1756	113.3	-.0331	-12.6
1897	457	112.0	+319	+61.1	58.19	100.1	- .20	- .3	.1490	96.1	-.0044	+ 3.0
1898	532	130.4	+161	+23.7	58.11	99.9	- .12	- .2	.1465	94.5	-.0069	+ 4.7
1899	492	120.6	+217	+34.8	58.16	100.0	- .17	- .3	.1438	92.8	-.0085	+ 6.6
1900	462	113.2	+223	+36.1	58.17	100.1	- .18	- .3	.1489	96.1	-.0045	+ 3.0
1901	598	146.6	+ 89	+11.8	57.65	99.2	+ .34	+ .6	.1457	94.0	-.0077	+ 5.3
1902	622	152.5	+ 14	+ 1.7	57.81	99.4	+ .18	+ .3	.1357	100.5	-.0023	- 1.5
1903	629	154.2			57.99	99.7			.1531	99.0		

WEAVERS, RIBBON, Male.

[Data from 2 establishments.]

Av. 1890-99.	118	100.0	-21	-17.8	56.15	100.0	-1.15	-2.0	\$0.2374	100.0	-\$0.0313	-13.2
1890	123	104.2	- 26	-21.1	58.98	105.0	-3.98	-6.7	.2765	116.5	-.0704	-25.5
1891	95	80.5	+ 2	+ 2.1	58.42	104.0	-3.42	-5.9	.2335	98.4	-.0274	-11.7
1892	113	95.8	-16	-14.2	59.12	105.3	-4.12	-7.0	.2343	98.7	-.0282	-12.0
1893	106	89.8	- 9	- 8.5	55.00	98.0			.2542	107.1	-.0181	-18.9
1894	153	129.7	- 56	-36.6	55.00	98.0			.2141	90.2	-.0080	- 3.7
1895	144	122.0	- 47	-32.6	55.00	98.0			.2377	100.1	-.0316	-14.3
1896	93	78.8	+ 4	+ 4.3	55.00	98.0			.2425	102.1	-.0364	-15.0
1897	118	100.0	-21	-17.8	55.00	98.0			.2105	88.7	-.0044	- 2.1
1898	153	129.7	- 56	-36.6	55.00	98.0			.2352	99.1	-.0291	-12.4
1899	80	67.8	+17	+21.3	55.00	98.0			.2350	99.0	-.0289	-12.3
1900	116	98.3	-19	-16.4	55.00	98.0			.2238	93.0	-.0147	- 6.7
1901	67	56.8	+30	+44.8	55.00	98.0			.1979	83.4	-.0082	+ 4.1
1902	58	49.2	+39	+67.2	55.00	98.0			.1965	82.8	-.0096	+ 4.9
1903	97	82.2			55.00	98.0			.2061	88.8		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 716.]

SLAUGHTERING AND MEAT PACKING—Continued.

HEADERS, CATTLE, Male.

[Data from 5 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num-ber.	Per- cent.			Num-ber.	Per- cent.			Amount.	Per- cent.
Av. 1890-99.	17	100.0	+2	+11.8	53.21	100.0	-2.21	-4.2	\$0.2689	100.0	+\$0.0621	+23.1
1890.	18	105.9	+1	+5.6	53.94	101.4	-2.94	-5.5	.2630	97.8	+.0680	+25.9
1891.	18	105.9	+1	+5.6	53.94	101.4	-2.94	-5.5	.2630	97.8	+.0680	+25.9
1892.	18	105.9	+1	+5.6	53.94	101.4	-2.94	-5.5	.2630	97.8	+.0680	+25.9
1893.	17	100.0	+2	+11.8	53.59	100.7	-2.59	-4.8	.2744	102.0	+.0566	+20.6
1894.	17	100.0	+2	+11.8	53.59	100.7	-2.59	-4.8	.2633	97.9	+.0677	+25.7
1895.	17	100.0	+2	+11.8	52.71	99.1	-1.71	-3.2	.2717	101.0	+.0593	+21.8
1896.	17	100.0	+2	+11.8	52.71	99.1	-1.71	-3.2	.2650	98.5	+.0660	+24.9
1897.	17	100.0	+2	+11.8	52.71	99.1	-1.71	-3.2	.2733	101.6	+.0577	+21.1
1898.	16	94.1	+3	+18.8	52.25	98.2	-1.25	-2.4	.2842	105.7	+.0468	+17.5
1899.	17	100.0	+2	+11.8	52.71	99.1	-1.71	-3.2	.2694	99.8	+.0625	+23.2
1900.	17	100.0	+2	+11.8	52.71	99.1	-1.71	-3.2	.2999	107.8	+.0411	+14.2
1901.	16	94.1	+3	+18.8	52.25	98.2	-1.25	-2.4	.2985	107.3	+.0425	+15.7
1902.	19	111.8			51.00	95.9			.3059	113.8	+.0251	+9.2
1903.	19	111.8			51.00	95.9			.3310	123.1		

HEADERS, HOG, Male.

[Data from 6 establishments.]

Av. 1890-99.	7	100.0	-1	-14.3	52.59	100.0	+0.74	+1.4	\$0.2642	100.0	+\$0.0175	+6.6
1890.	8	114.3	-2	-25.0	51.00	97.0	+2.33	+4.6	.2763	97.0	+.0254	+9.6
1891.	8	114.3	-2	-25.0	51.00	97.0	+2.33	+4.6	.2663	97.0	+.0254	+9.6
1892.	8	114.3	-2	-25.0	51.00	97.0	+2.33	+4.6	.2663	97.0	+.0254	+9.6
1893.	8	114.3	-2	-25.0	51.00	97.0	+2.33	+4.6	.2644	107.6	+.0027	+1.0
1894.	8	114.3	-2	-25.0	51.00	97.0	+2.33	+4.6	.2644	107.6	+.0027	+1.0
1895.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1896.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1897.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1898.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1899.	6	85.7			54.17	103.0	-1.84	-1.6	.2642	99.2	+.0275	+10.4
1900.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1901.	6	85.7			54.17	103.0	-1.84	-1.6	.2625	99.4	+.0192	+7.2
1902.	6	85.7			53.33	101.4			.2683	97.8	+.0234	+8.8
1903.	6	85.7			53.33	101.4			.2617	101.6		

LABORERS, Male.

[Data from 4 establishments.]

Av. 1890-99.	4,148	100.0	-1,912	-43.0	60.00	100.0			\$0.1619	100.0	-\$0.0127	-7.8
1890.	3,785	85.1	-2,575	-68.0	60.00	100.0			.1792	105.1	+.0544	+33.6
1891.	3,885	87.3	-2,475	-63.7	60.00	100.0			.1760	105.0	+.0546	+33.7
1892.	4,035	90.7	-2,325	-57.6	60.00	100.0			.1792	105.1	+.0544	+33.6
1893.	3,955	88.9	-2,405	-60.8	60.00	100.0			.1709	105.6	+.0607	+37.5
1894.	4,135	99.7	-1,925	-43.4	60.00	100.0			.1741	95.4	+.0202	+12.5
1895.	4,505	101.3	-1,855	-41.2	60.00	100.0			.1587	94.9	+.0269	+16.6
1896.	4,565	101.3	-1,855	-41.2	60.00	100.0			.1553	91.5	+.0216	+13.3
1897.	4,815	108.2	-1,545	-32.1	60.00	100.0			.1739	94.9	+.0210	+13.0
1898.	4,965	111.6	-1,395	-28.1	60.00	100.0			.1584	98.0	+.0360	+22.3
1899.	5,590	125.7	-770	-13.8	60.00	100.0			.1615	101.5	+.0168	+10.4
1900.	5,800	120.4	-560	-9.7	60.00	100.0			.1598	98.0	+.0160	+9.9
1901.	6,110	127.4	-250	-4.1	60.00	100.0			.1574	97.2	+.0172	+10.6
1902.	6,420	144.3			60.00	100.0			.1611	101.5	+.0102	+6.3
1903.	6,390	143.0			60.00	100.0			.1716	105.8		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 713.]

SLAUGHTERING AND MEAT PACKING—Continued.

PICKLERS, Male.

[Data from 7 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	355	100.0	+211	+ 59.4	68.00	100.0	-0.01	-0.02	\$0.1642	100.0	+\$0.0230	+14.0
1890	216	60.8	+350	+162.0	60.00	100.0	-0.01	-0.02	.1708	104.0	+0.0164	+ 9.6
1891	245	69.0	+321	+131.0	60.00	100.0	-0.01	-0.02	.1696	103.3	+0.0176	+10.4
1892	251	70.7	+315	+125.5	60.00	100.0	-0.01	-0.02	.1698	103.4	+0.0174	+10.2
1893	265	74.6	+301	+113.6	60.00	100.0	-0.01	-0.02	.1698	103.4	+0.0174	+10.2
1894	315	88.7	+251	+ 79.7	60.00	100.0	-0.01	-0.02	.1580	96.2	+0.0292	+18.5
1895	372	104.8	+194	+ 52.2	60.00	100.0	-0.01	-0.02	.1561	95.1	+0.0311	+19.9
1896	410	115.5	+156	+ 38.0	60.00	100.0	-0.01	-0.02	.1568	95.5	+0.0304	+19.4
1897	483	136.1	+ 83	+ 17.2	60.00	100.0	-0.01	-0.02	.1590	96.8	+0.0282	+17.7
1898	522	147.0	+ 44	+ 8.4	60.00	100.0	-0.01	-0.02	.1639	99.8	+0.0233	+14.2
1899	470	132.4	+ 96	+ 20.4	60.00	100.0	-0.01	-0.02	.1678	102.2	+0.0194	+11.6
1900	485	136.6	+ 81	+ 16.7	60.00	100.0	-0.01	-0.02	.1650	100.5	+0.0229	+13.5
1901	535	150.7	+ 31	+ 5.8	60.00	100.0	-0.01	-0.02	.1655	100.8	+0.0217	+13.1
1902	546	153.8	+ 20	+ 3.7	59.99	100.0			.1772	107.9	+0.0100	+ 5.6
1903	566	159.4			59.99	100.0			.1872	114.0		

BUMP SKINNERS, CATTLE, Male.

[Data from 2 establishments.]

Year.	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Wages per hour.	Amount.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	6	100.0		60.00	100.0		\$0.3158	100.0	+\$0.0925
1890	4	66.7	+2	50.0	100.0		.3250	102.9	+0.0833
1891	4	66.7	+2	50.0	100.0		.3250	102.9	+0.0833
1892	4	66.7	+2	50.0	100.0		.3250	102.9	+0.0833
1893	6	100.0		60.00	100.0		.3167	100.3	+0.0916
1894	6	100.0		60.00	100.0		.3000	95.0	+0.1083
1895	6	100.0		60.00	100.0		.3000	95.0	+0.1083
1896	6	100.0		60.00	100.0		.3000	95.0	+0.1083
1897	6	100.0		60.00	100.0		.3000	95.0	+0.1083
1898	6	100.0		60.00	100.0		.3167	100.3	+0.0916
1899	7	116.7	-1	14.3	60.00	100.0	.3500	110.8	+0.0883
1900	7	116.7	-1	14.3	60.00	100.0	.3500	110.8	+0.0883
1901	7	116.7	-1	14.3	60.00	100.0	.3500	110.8	+0.0883
1902	7	116.7	-1	14.3	60.00	100.0	.3750	118.7	+0.0333
1903	6	100.0		60.00	100.0		.4083	129.3	

SCRAPERS, HOG, Male.

[Data from 5 establishments.]

Year.	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.	Wages per hour.	Amount.	Increase (+) or decrease (-) in 1903 as compared with year specified.
Av. 1890-99.	19	100.0	-8	48.42	100.0	-0.06	\$0.2634	100.0	-\$0.0111
1890	19	100.0	-8	48.42	100.0	-0.27	.2750	104.4	+0.0227
1891	19	100.0	-8	48.42	100.0	-0.27	.2750	104.4	+0.0227
1892	19	100.0	-8	48.42	100.0	-0.27	.2750	104.4	+0.0227
1893	19	100.0	-8	48.42	100.0	-0.27	.2750	104.4	+0.0227
1894	19	100.0	-8	48.42	100.0	-0.27	.2763	104.9	+0.0240
1895	19	100.0	-8	48.42	100.0	-0.27	.2763	104.9	+0.0240
1896	19	100.0	-8	48.42	100.0	-0.27	.2763	104.9	+0.0240
1897	19	100.0	-8	48.42	100.0	-0.27	.2763	104.9	+0.0240
1898	19	100.0	-8	48.42	100.0	-0.27	.2132	80.9	+0.0391
1899	16	84.2	-5	31.3	46.50	+1.86	.2156	81.9	+0.0367
1900	11	57.9		48.82	100.8	-0.46	.2682	101.8	+0.0159
1901	11	57.9		48.82	100.8	-0.46	.2545	96.6	+0.0022
1902	11	57.9		48.36	99.9		.2545	96.6	+0.0022
1903	11	57.9		48.36	99.9		.2523	95.8	

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 714.]

SOAP—Continued.

CUTTERS, Male.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	19	100.0	+1	+ 5.3	59.37	100.0	+0.63	+1.1	\$0.1633	100.0	+\$0.0117	+7.2
1890	19	100.0	+1	+ 5.3	58.11	97.9	+1.89	+3.3	.1627	99.6	+.0123	-7.6
1891	19	100.0	+1	+ 5.3	58.11	97.9	+1.89	+3.3	.1632	99.9	+.0118	-7.2
1892	19	100.0	+1	+ 5.3	58.11	97.9	+1.89	+3.3	.1636	100.2	+.0114	-7.0
1893	17	89.5	+3	+17.6	60.00	101.1	.....	.....	.1622	99.3	+.0128	-7.9
1894	19	100.0	+1	+ 5.3	59.37	100.0	.....	.....	.1640	100.4	+.0110	-6.7
1895	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1632	99.9	+.0118	-7.2
1896	17	89.5	+3	+17.6	60.00	101.1	.....	.....	.1637	100.2	+.0113	-6.9
1897	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1623	99.4	+.0127	-7.9
1898	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1645	100.7	+.0106	-6.4
1899	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1636	100.2	+.0114	-7.0
1900	17	89.5	+3	+17.6	60.00	101.1	.....	.....	.1668	102.9	+.0082	-4.9
1901	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1681	102.9	+.0069	-4.1
1902	19	100.0	+1	+ 5.3	60.00	101.1	.....	.....	.1681	102.9	+.0069	-4.1
1903	20	105.3	.....	.....	60.00	101.1	.....	.....	.1750	107.2	.....	.....

LABORERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	179	100.0	-12	- 6.7	58.21	100.0	+1.79	+ 3.1	\$0.1645	100.0	+\$0.0106	- 6.4
1890	183	102.2	-16	- 8.7	54.10	92.9	+5.90	+10.9	.1825	110.9	+.0074	- 4.1
1891	193	107.8	-26	-13.5	54.09	92.9	+5.91	+10.9	.1826	111.0	+.0075	- 4.1
1892	203	113.4	-36	-17.7	51.09	92.9	+5.91	+10.9	.1826	111.0	+.0075	- 4.1
1893	152	84.9	+15	+ 9.9	60.00	103.1	.....	.....	.1497	91.0	+.0254	+17.0
1894	163	91.1	+ 4	+ 2.5	59.78	102.7	.....	.....	.1546	94.0	+.0205	+13.3
1895	173	96.6	- 6	- 3.5	60.00	103.1	.....	.....	.1546	94.0	+.0205	+13.3
1896	173	96.6	- 6	- 3.5	60.00	103.1	.....	.....	.1597	97.1	+.0154	- 9.6
1897	172	96.1	- 5	- 2.9	60.00	103.1	.....	.....	.1597	97.1	+.0154	- 9.6
1898	193	107.8	-26	-13.5	60.00	103.1	.....	.....	.1597	97.1	+.0154	- 9.6
1899	183	102.2	-16	- 8.7	60.00	103.1	.....	.....	.1597	97.1	+.0154	- 9.6
1900	163	91.1	+ 4	+ 2.5	60.00	103.1	.....	.....	.1616	100.1	+.0106	- 6.4
1901	163	91.1	+ 4	+ 2.5	60.00	103.1	.....	.....	.1647	100.1	+.0104	- 6.3
1902	163	91.1	+ 4	+ 2.5	60.00	103.1	.....	.....	.1647	100.1	+.0104	- 6.3
1903	167	93.3	.....	.....	60.00	103.1	.....	.....	.1751	106.4	.....	.....

MIXERS, Male.

[Data from 2 establishments.]

Av. 1890-99.	13	100.0	.....	.....	58.61	100.0	+1.39	+2.4	\$0.1775	100.0	+\$0.0140	-10.1
1890	13	100.0	.....	.....	55.38	94.5	+4.62	+8.3	.1859	104.7	+.0096	- 5.2
1891	13	100.0	.....	.....	55.38	94.5	+4.62	+8.3	.1853	104.4	+.0102	- 5.5
1892	13	100.0	.....	.....	55.38	94.5	+4.62	+8.3	.1859	104.7	+.0096	- 5.2
1893	11	84.6	+ 2	+18.2	60.00	102.4	.....	.....	.1706	96.1	+.0249	+14.6
1894	13	100.0	.....	.....	60.00	102.4	.....	.....	.1705	96.1	+.0250	+14.7
1895	13	100.0	.....	.....	60.00	102.4	.....	.....	.1705	96.1	+.0250	+14.7
1896	13	100.0	.....	.....	60.00	102.4	.....	.....	.1705	96.1	+.0250	+14.7
1897	13	100.0	.....	.....	60.00	102.4	.....	.....	.1782	100.4	+.0173	+ 9.7
1898	13	100.0	.....	.....	60.00	102.4	.....	.....	.1788	100.7	+.0167	+ 9.3
1899	13	100.0	.....	.....	60.00	102.4	.....	.....	.1788	100.7	+.0167	+ 9.3
1900	13	100.0	.....	.....	60.00	102.4	.....	.....	.1712	96.6	+.0243	+14.2
1901	13	100.0	.....	.....	60.00	102.4	.....	.....	.1795	101.1	+.0180	+ 9.9
1902	13	100.0	.....	.....	60.00	102.4	.....	.....	.1878	105.8	+.0077	+ 4.1
1903	13	100.0	.....	.....	60.00	102.4	.....	.....	.1855	110.1	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SOAP—Concluded.

MOLDERS, Male.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	4	100.0	.....	.....	60.00	100.0	.....	.....	\$0.1686	100.0	+\$0.0085	+5.0
1890	4	100.0	.....	.....	60.00	100.0	.....	.....	.1667	93.9	+.0101	+6.2
1891	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1892	4	100.0	.....	.....	60.00	100.0	.....	.....	.1667	98.9	+.0104	+6.2
1893	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1894	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1895	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1896	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1897	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1898	4	100.0	.....	.....	60.00	100.0	.....	.....	.1688	100.1	+.0083	+4.9
1899	4	100.0	.....	.....	60.00	100.0	.....	.....	.1709	101.4	+.0062	+3.6
1900	4	100.0	.....	.....	60.00	100.0	.....	.....	.1709	101.4	+.0062	+3.6
1901	4	100.0	.....	.....	60.00	100.0	.....	.....	.1729	102.6	+.0042	+2.4
1902	4	100.0	.....	.....	60.00	100.0	.....	.....	.1750	103.8	+.0021	+1.2
1903	4	100.0	.....	.....	60.00	100.0	.....	.....	.1771	105.0	.....	.....

PRESSERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	55	100.0	-29	-52.7	58.42	100.0	+1.58	+2.7	\$0.1076	100.0	+\$0.0521	+48.4
1890	63	114.5	-37	-58.7	54.76	93.7	+5.24	+9.6	.1134	105.4	+.0463	+40.8
1891	68	105.5	-32	-55.2	54.83	93.9	+5.17	+9.4	.1136	105.6	+.0461	+40.6
1892	68	105.5	-32	-55.2	54.83	93.9	+5.17	+9.4	.1139	105.8	+.0458	+40.2
1893	38	69.1	-12	-31.6	60.00	102.7	.....	.....	.1066	99.1	+.0531	+49.8
1894	48	87.3	-22	-45.8	59.75	102.3	.....	.....	.1052	97.8	+.0545	+51.8
1895	58	105.5	-32	-55.2	60.00	102.7	.....	.....	.1048	97.4	+.0549	+52.4
1896	58	105.5	-32	-55.2	60.00	102.7	.....	.....	.1045	97.1	+.0552	+52.8
1897	58	105.5	-32	-55.2	60.00	102.7	.....	.....	.1043	96.9	+.0554	+53.1
1898	58	105.5	-32	-55.2	60.00	102.7	.....	.....	.1045	97.1	+.0552	+52.8
1899	53	96.4	-27	-50.9	60.00	102.7	.....	.....	.1050	97.6	+.0547	+52.1
1900	53	96.4	-27	-50.9	60.00	102.7	.....	.....	.1058	98.3	+.0539	+50.9
1901	26	47.3	.....	.....	60.00	102.7	.....	.....	.1468	136.4	+.0129	+ 8.8
1902	26	47.3	.....	.....	60.00	102.7	.....	.....	.1481	137.6	+.0116	+ 7.8
1903	26	47.3	.....	.....	60.00	102.7	.....	.....	.1597	148.4	.....	.....

STOVES.

MOLDERS, Male.

[Data from 7 establishments.]

Av. 1890-99.	100.0	+222	+ 59.5	53.19	100.0	-0.04	-0.1	\$0.2788	100.0	+\$0.1055	+37.8
1890	90.7	+294	+ 97.7	53.52	100.6	-0.37	-0.7	.2671	95.8	+.1172	+43.9
1891	85.8	+245	+ 70.0	53.16	99.9	-0.01	-0.02	.2658	95.3	+.1185	+44.6
1892	89.9	+226	+ 61.2	53.46	100.5	-0.31	-0.6	.2711	97.2	+.1132	+41.8
1893	108.8	+189	+ 46.6	52.86	99.4	+0.29	+0.5	.2844	102.0	+.0999	+35.1
1894	78.6	+302	+103.1	53.20	100.0	-0.05	-0.1	.2688	96.4	+.1155	+43.0
1895	97.3	+232	+ 63.9	53.19	100.0	-0.04	-0.1	.2741	98.5	+.1102	+40.2
1896	100.3	+221	+ 59.1	53.13	99.9	+0.02	+0.04	.2793	100.2	+.1050	+37.6
1897	102.1	+214	+ 56.2	52.99	99.6	+0.16	+0.3	.2821	101.2	+.1022	+36.2
1898	116.6	+160	+ 36.8	53.23	100.1	-0.08	-0.2	.2836	101.7	+.1007	+35.5
1899	122.8	+137	+ 29.9	53.16	99.9	-0.01	-0.02	.3120	111.9	+.0723	+23.5
1900	112.3	+176	+ 42.0	53.28	100.2	-0.13	-0.2	.3213	115.2	+.0630	+ 9.0
1901	121.1	+136	+ 29.6	53.33	100.3	-0.18	-0.3	.3392	121.7	+.0451	+ 3.0
1902	139.4	+ 75	+ 14.4	53.23	100.1	-0.08	-0.2	.3592	128.8	+.0233	+ 1.0
1903	159.5	.....	.....	53.18	99.9	.....	.....	.3843	157.8	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

STOVES—Concluded.

MOUNTERS, Male.

[Data from 7 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age num- ber.	Rela- tive num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Aver- age.	Rela- tive.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	147	100.0	+10	+ 6.8	58.51	100.0	+0.40	+0.7	30.2149	100.0	+\$0.0870	-4.7
1890	147	100.0	+10	+ 6.8	58.52	100.0	+0.39	+ .7	1866	86.8	+ .1153	-21.8
1891	146	99.3	+11	+ 7.5	58.32	99.7	+0.59	+1.0	1989	92.6	+ .1080	-51.6
1892	157	106.8			58.55	100.1	+0.36	+ .6	2031	94.5	+ .0988	-48.6
1893	177	120.4	-20	-11.3	58.29	99.6	+0.62	+1.1	2114	98.4	+ .0905	-12.5
1894	114	77.6	+43	+37.7	58.34	99.7	+0.57	+1.0	1953	90.9	+ .1066	-54.6
1895	137	93.2	+20	+14.6	58.36	99.7	+0.55	+ .9	2172	101.1	+ .0947	-39.0
1896	156	106.1	+1	+ .6	54.70	100.3	+0.21	+ .4	2002	93.2	+ .1017	-56.8
1897	145	98.6	+12	+ 8.3	58.66	100.3	+0.25	+ .4	2195	102.1	+ .0824	-35.3
1898	137	93.2	+30	+14.6	58.63	100.2	+0.28	+ .5	2379	110.7	+ .0640	-26.9
1899	150	102.0	+7	+ 4.7	58.68	100.3	+0.23	+ .4	2784	129.5	+ .0235	-2.4
1900	157	106.8			58.78	100.5	+0.13	+ .2	2571	119.6	+ .0446	-17.4
1901	168	114.3	-11	- 6.5	58.83	100.5	+0.08	+ .1	3077	143.2	+ .0058	1.9
1902	171	116.3	-14	- 8.2	53.82	100.5	+0.09	+ .2	2912	135.5	+ .0107	-5.7
1903	157	106.8			58.91	100.7			3019	140.5		

PATTERN MAKERS, Male.

[Data from 5 establishments.]

Av. 1890-99.	37	100.0	-4	-10.8	59.32	100.0	-0.02	-0.03	30.2453	100.0	-\$0.0113	-1.0
1890	31	83.8	+2	+ 6.5	59.42	100.2	-0.12	- .2	2398	97.6	+ .0053	-2.2
1891	54	145.9	-21	-38.9	59.24	99.9	+0.06	+ .1	2407	98.1	+ .0067	-1.5
1892	47	127.0	-14	-29.8	59.26	99.9	+0.04	+ .1	2323	94.7	+ .0017	+ .7
1893	34	91.9	-1	- 2.9	59.38	100.1	-0.08	- .1	2381	97.1	+ .0041	+ 1.7
1894	32	86.5	+1	+ 3.1	59.31	100.0	-0.01	- .02	2461	100.3	+ .0121	-4.9
1895	44	118.9	-11	-25.0	59.25	99.9	+0.05	+ .1	2337	95.3	+ .0035	-1.1
1896	36	97.3	-3	- 8.3	59.31	100.0	-0.01	- .02	2421	98.7	+ .0081	-2.3
1897	29	59.5	+11	+50.0	59.45	100.2	-0.15	- .3	2603	106.1	+ .0293	-19.1
1898	33	89.2			59.30	100.0			2623	106.9	+ .0283	-10.0
1899	41	110.8	-8	-19.5	59.24	99.9	+0.06	+ .1	2581	105.2	+ .0241	-9.3
1900	42	113.5	-9	-21.4	59.21	99.8	+0.09	+ .2	2571	104.8	+ .0231	-9.2
1901	46	124.3	-13	-28.3	59.22	99.8	+0.08	+ .1	2416	98.5	+ .0076	-3.1
1902	51	145.9	-21	-38.9	59.24	99.9	+0.06	+ .1	2464	100.4	+ .0124	-3.1
1903	33	89.2			59.30	100.0			2340	95.4		

STREETS AND SEWERS, CONTRACT WORK.

LABORERS, Male.

[Data from 36 establishments.]

Av. 1890-99.	3,218	100.0	+127	+ 3.9	58.72	100.0	3.40	-5.8	30.1534	100.0	+\$0.0481	-31.4
1890	3,292	102.3	+53	+ 1.6	59.44	101.2	-4.12	-6.9	1483	96.7	+ .0532	-35.9
1891	3,917	121.7	-572	-14.6	59.52	101.4	-4.20	-7.1	1365	89.0	+ .0650	-47.6
1892	3,614	112.3	-269	-7.4	59.46	101.3	-4.14	-7.0	1522	99.2	+ .0493	-12.4
1893	3,531	109.7	-186	-5.3	59.31	101.0	-3.99	-6.7	1486	96.9	+ .0529	-38.6
1894	3,452	107.3	-107	-3.1	59.32	101.0	-4.00	-6.7	1503	98.0	+ .0512	-34.1
1895	2,932	91.1	+413	+11.1	59.06	100.6	-3.74	-6.3	1526	99.5	+ .0489	-32.0
1896	3,183	98.9	+562	+5.1	58.54	99.7	-3.22	-5.5	1595	101.0	+ .0420	-34.3
1897	2,754	85.6	+191	+21.5	57.18	97.4	-1.86	-3.3	1607	104.8	+ .0408	-35.4
1898	2,619	81.4	+726	+27.7	57.25	97.5	-1.93	-3.4	1631	105.3	+ .0384	-35.5
1899	2,884	89.6	+461	+16.0	58.16	99.0	-2.84	-4.9	1626	106.0	+ .0399	-35.9
1900	3,198	99.4	+147	+ 4.5	58.03	98.8	-2.71	-4.7	1660	108.2	+ .0355	-32.4
1901	3,222	100.1	+123	+ 3.8	56.02	95.4	-7.0	-1.2	1821	118.7	+ .0194	-16.7
1902	3,243	100.8	+102	+ 3.1	55.31	94.2	+0.01	+ .02	1940	126.5	+ .0076	-8.9
1903	3,345	103.9			55.32	94.2			2015	131.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

STREETS AND SEWERS, MUNICIPAL WORK.

LABORERS, Male.

[Data for employees from 47 establishments for entire period. Data for hours and wages from 47 establishments, 1890-1893; 48 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	10,816	100.0	-1,362	-12.6	64.71	100.0	-4.12	-7.6	\$0.1816	100.0	+\$0.0215	+11.8
1890.	9,701	89.7	-247	-2.5	55.03	100.6	-4.44	-8.1	.1814	99.9	+.0217	+12.0
1891.	9,453	87.7	-29	-.3	54.96	100.5	-4.37	-8.0	.1807	99.6	+.0224	+12.4
1892.	10,644	98.4	-1,190	-11.2	61.95	100.4	-4.36	-7.9	.1789	98.5	+.0242	+13.5
1893.	11,266	104.2	-1,812	-16.1	55.15	100.8	-4.56	-8.3	.1786	98.8	+.0245	+13.7
1894.	12,523	115.8	-3,069	-24.5	55.07	100.7	-4.48	-8.1	.1832	100.9	+.0199	+10.9
1895.	11,325	104.7	-1,871	-16.5	54.81	100.2	-4.22	-7.7	.1809	99.6	+.0222	+12.3
1896.	11,065	102.6	-1,641	-14.8	54.76	100.1	-4.17	-7.6	.1787	98.4	+.0244	+13.7
1897.	11,063	101.7	-1,549	-14.1	54.98	100.5	-4.39	-8.0	.1790	98.6	+.0241	+13.5
1898.	10,098	93.4	-614	-6.4	54.65	99.9	-1.06	-7.4	.1810	100.6	+.0204	+11.2
1899.	11,021	101.9	-1,507	-14.2	52.74	96.4	-2.15	-4.1	.1919	105.7	+.0112	+5.8
1900.	10,963	100.8	-1,449	-13.3	51.39	93.9	-.80	-1.6	.2001	110.2	+.0030	+1.5
1901.	11,434	105.7	-1,980	-17.3	51.00	93.2	-.41	-.8	.2009	110.6	+.0022	+1.1
1902.	10,179	94.1	-725	-7.1	51.01	93.2	-.42	-.8	.2015	111.0	+.0016	+.8
1903.	9,454	87.4			50.69	92.6			.2031	111.8		

SUGAR REFINING.

BOILERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894.	43	(a)	+11	+25.6	65.12	(a)	+2.81	+4.3	\$0.2884	(a)	+\$0.0139	+5.8
1895.	46	(a)	+8	+17.4	66.35	(a)	+1.58	+2.4	.2471	(a)	+.0052	+2.1
1896.	41	(a)	+10	+22.7	61.27	(a)	+3.66	+5.7	.2534	(a)	-.0011	-.4
1897.	46	(a)	+8	+17.4	63.91	(a)	+4.02	+6.3	.2533	(a)	-.0010	-.4
1898.	45	(a)	+9	+20.0	64.71	(a)	+3.22	+5.0	.2542	(a)	-.0019	-.8
1899.	43	(a)	+11	+25.6	62.51	(a)	+5.42	+8.7	.2516	(a)	+.0007	+.3
1900.	44	(a)	+10	+22.7	63.00	(a)	+4.93	+7.8	.2520	(a)	+.0003	+.1
1901.	48	(a)	+6	+12.5	65.33	(a)	+2.60	+4.0	.2501	(a)	+.0022	+.9
1902.	47	(a)	+7	+14.9	65.53	(a)	+2.40	+3.7	.2515	(a)	+.0008	+.3
1903.	54	(a)			67.93	(a)			.2523	(a)		

CENTRIFUGAL TENDERS, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894.	111	(a)	+5	+4.5	84.00	(a)			\$0.1417	(a)	-\$0.0084	-5.9
1895.	77	(a)	+39	+50.6	84.00	(a)			.1117	(a)	-.0064	-5.9
1896.	76	(a)	+40	+52.6	84.00	(a)			.1333	(a)		
1897.	80	(a)	+26	+28.9	84.00	(a)			.1333	(a)		
1898.	73	(a)	+43	+58.9	81.00	(a)			.1333	(a)		
1899.	79	(a)	+37	+46.8	84.00	(a)			.1333	(a)		
1900.	73	(a)	+43	+58.9	84.00	(a)			.1333	(a)		
1901.	65	(a)	+51	+78.5	84.00	(a)			.1333	(a)		
1902.	68	(a)	+48	+70.6	84.00	(a)			.1333	(a)		
1903.	116	(a)			84.00	(a)			.1333	(a)		

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 712.]

SUGAR REFINING—Continued.

COOPERS, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (—) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	14	(a)	—7	—50.0	84.00	(a)	.....	.....	\$0.1262	(a)	—\$0.0083	—6.6
1895	14	(a)	—7	—50.0	84.00	(a)	.....	.....	.1119	(a)	+ .0060	+4.8
1896	11	(a)	—4	—36.4	84.00	(a)	.....	.....	.1144	(a)	+ .0035	+3.1
1897	8	(a)	—1	—12.5	84.00	(a)	.....	.....	.1167	(a)	+ .0012	+1.0
1898	8	(a)	—1	—12.5	84.00	(a)	.....	.....	.1167	(a)	+ .0012	+1.0
1899	6	(a)	+1	+16.7	84.00	(a)	.....	.....	.1125	(a)	+ .0054	+4.8
1900	4	(a)	+3	+75.0	84.00	(a)	.....	.....	.1125	(a)	+ .0054	+4.8
1901	4	(a)	+3	+75.0	84.00	(a)	.....	.....	.1125	(a)	+ .0054	+4.8
1902	3	(a)	+4	+133.3	84.00	(a)	.....	.....	.1139	(a)	+ .0040	+3.2
1903	7	(a)	.....	.....	84.00	(a)	.....	.....	.1179	(a)	.....	.....

FILTER MEN, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	84	(a)	+66	+78.6	84.00	(a)	.....	.....	\$0.1275	(a)	—\$0.0117	—9.2
1895	66	(a)	+84	+127.3	84.00	(a)	.....	.....	.1146	(a)	+ .0012	+1.0
1896	68	(a)	+82	+120.6	84.00	(a)	.....	.....	.1137	(a)	+ .0021	+1.8
1897	45	(a)	+105	+233.3	84.00	(a)	.....	.....	.1272	(a)	+ .0114	+9.0
1898	42	(a)	+108	+257.1	84.00	(a)	.....	.....	.1157	(a)	+ .0001	+1
1899	51	(a)	+99	+194.1	84.00	(a)	.....	.....	.1147	(a)	+ .0011	+1.0
1900	59	(a)	+91	+154.2	84.00	(a)	.....	.....	.1168	(a)	+ .0010	+1
1901	76	(a)	+74	+97.4	84.00	(a)	.....	.....	.1174	(a)	+ .0016	+1.4
1902	73	(a)	+77	+105.5	84.00	(a)	.....	.....	.1156	(a)	+ .0002	+2
1903	150	(a)	.....	.....	84.00	(a)	.....	.....	.1158	(a)	.....	.....

FIREMEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	129	(a)	—1	—0.8	75.35	(a)	—2.13	—2.8	\$0.1627	(a)	+ \$0.0025	+1.5
1895	126	(a)	+2	+1.6	75.21	(a)	—2.02	—2.7	.1639	(a)	+ .0013	+1
1896	131	(a)	—3	—2.3	75.21	(a)	—1.99	—2.6	.1637	(a)	+ .0015	+1
1897	123	(a)	+5	+4.1	74.34	(a)	—1.12	—1.5	.1644	(a)	+ .0008	+1
1898	101	(a)	+27	+26.7	73.43	(a)	—21	—3	.1654	(a)	+ .0002	+1
1899	104	(a)	+24	+23.1	73.50	(a)	—28	—4	.1641	(a)	+ .0011	+1
1900	103	(a)	+25	+24.3	73.28	(a)	—25	—3	.1643	(a)	+ .0009	+1
1901	99	(a)	+29	+29.3	73.58	(a)	—36	—5	.1641	(a)	+ .0011	+1
1902	153	(a)	—25	—16.3	73.65	(a)	—43	—6	.1639	(a)	+ .0013	+1
1903	128	(a)	.....	.....	73.22	(a)	.....	.....	.1652	(a)	.....	.....

LABORERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	2,147	(a)	—345	—16.1	71.87	(a)	—2.47	—3.4	\$0.1515	(a)	+ \$0.0036	+2.4
1895	1,789	(a)	+13	+0.7	70.35	(a)	—36	—1.4	.1522	(a)	+ .0029	+1.9
1896	1,597	(a)	—95	—5.6	69.82	(a)	—42	—6	.1537	(a)	+ .0014	+1
1897	1,596	(a)	+206	+12.9	70.92	(a)	—152	—2.1	.1506	(a)	+ .0043	+2.9
1898	1,382	(a)	+420	+30.4	69.53	(a)	—18	—2	.1550	(a)	+ .0001	+1
1899	1,427	(a)	+375	+28.3	69.58	(a)	—18	—3	.1541	(a)	+ .0010	+1
1900	1,432	(a)	+370	+28.8	68.93	(a)	+47	+7	.1559	(a)	+ .0008	+1
1901	1,596	(a)	+206	+12.9	70.41	(a)	—101	—1.4	.1518	(a)	+ .0023	+2.2
1902	1,495	(a)	—93	—4.9	70.45	(a)	—106	—1.5	.1513	(a)	+ .0023	+2.2
1903	1,802	(a)	.....	.....	69.40	(a)	.....	.....	.1531	(a)	.....	.....

a Not ascertained, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SUGAR REFINING—Concluded.

WATER TENDERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	23	(a)	+8	+34.8	72.52	(a)	+2.58	+3.6	\$0.2025	(a)	—\$0.0162	—8.0
1895	24	(a)	+7	+29.2	73.50	(a)	+1.60	+2.2	.1970	(a)	— .0107	—5.4
1896	23	(a)	+8	+34.8	73.04	(a)	+2.06	+2.8	.1996	(a)	— .0133	—6.7
1897	22	(a)	+9	+40.9	72.55	(a)	+2.55	+3.5	.2024	(a)	— .0161	—8.0
1898	23	(a)	+8	+34.8	73.04	(a)	+2.06	+2.8	.1996	(a)	— .0133	—6.7
1899	23	(a)	+8	+34.8	73.57	(a)	+1.53	+2.1	.1991	(a)	— .0128	—6.4
1900	22	(a)	+9	+40.9	73.09	(a)	+2.01	+2.8	.2019	(a)	— .0156	—7.7
1901	27	(a)	+4	+14.8	73.78	(a)	+1.32	+1.8	.1957	(a)	— .0094	—4.8
1902	26	(a)	+5	+19.2	72.92	(a)	+2.18	+3.0	.2018	(a)	— .0155	—7.7
1903	31	(a)	.....	.....	75.10	(a)	.....	.....	.1863	(a)	.....	.....

WEIGHERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	31	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	31	(a)	—1	—3.2	73.94	(a)	—1.94	—2.6	\$0.1725	(a)	+\$0.0886	+22.4
1895	35	(a)	—5	—14.3	75.77	(a)	—3.77	—5.0	.1625	(a)	+ .0486	+29.9
1896	33	(a)	—3	—9.1	73.09	(a)	—1.09	—1.5	.1748	(a)	+ .0363	+20.8
1897	36	(a)	—6	—16.7	74.67	(a)	—2.67	—3.6	.1778	(a)	+ .0333	+18.7
1898	26	(a)	+4	+15.4	69.23	(a)	+2.77	+4.0	.1931	(a)	+ .0180	+9.3
1899	30	(a)	.....	.....	72.00	(a)	.....	.....	.1861	(a)	+ .0250	+12.8
1900	27	(a)	+3	+11.1	70.67	(a)	+1.33	+1.9	.2096	(a)	+ .0015	+ .7
1901	25	(a)	+5	+20.0	68.64	(a)	+3.36	+4.9	.2167	(a)	— .0056	—2.6
1902	24	(a)	+6	+25.0	68.00	(a)	+4.00	+5.9	.2184	(a)	— .0077	—3.5
1903	30	(a)	.....	.....	72.00	(a)	.....	.....	.2111	(a)	.....	.....

WEIGHERS, SAMPLERS, AND TALLYMEN, RAW SUGAR, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	41	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	41	(a)	—1	—17.1	60.00	(a)	.....	.....	\$0.2142	(a)	+\$0.0363	+16.9
1895	41	(a)	—1	—17.1	60.00	(a)	.....	.....	.2144	(a)	+ .0361	+16.8
1896	41	(a)	—7	—17.1	60.00	(a)	.....	.....	.2187	(a)	+ .0318	+14.5
1897	42	(a)	—8	—19.0	60.00	(a)	.....	.....	.2159	(a)	+ .0346	+16.0
1898	39	(a)	—5	—12.8	60.00	(a)	.....	.....	.2197	(a)	+ .0308	+14.0
1899	37	(a)	—3	—8.1	60.00	(a)	.....	.....	.2187	(a)	+ .0318	+14.5
1900	34	(a)	.....	.....	60.00	(a)	.....	.....	.2218	(a)	+ .0287	+12.9
1901	34	(a)	.....	.....	60.00	(a)	.....	.....	.2221	(a)	+ .0284	+12.8
1902	33	(a)	.....	.....	60.00	(a)	.....	.....	.2586	(a)	— .0081	—3.1
1903	34	(a)	.....	.....	60.00	(a)	.....	.....	.2505	(a)	.....	.....

TIN PLATE.

ASSORTERS, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	3	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	3	(a)	.....	.....	56.67	(a)	.....	.....	\$0.3333	(a)	—\$0.0833	—25.0
1894	3	(a)	.....	.....	56.67	(a)	.....	.....	.3000	(a)	— .0500	—16.7
1895	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1896	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1897	2	(a)	+1	+50.0	57.00	(a)	—0.33	—0.6	.2500	(a)	.....	.....
1898	2	(a)	+1	+50.0	57.00	(a)	— .33	— .6	.2500	(a)	.....	.....
1899	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1900	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1901	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1902	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1903	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....

* Not computed, as data reported do not cover entire base period.

TABLE K.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SUGAR REFINING—Continued.

COOPERS, Male.

[No data, 1890-1893; data from establishment, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	14	(a)	-7	-50.0	84.00	(a)	.....	.....	\$0.1262	(a)	-\$0.0083	-6.6
1895	14	(a)	-7	-50.0	84.00	(a)	.....	.....	.1119	(a)	+.0060	+5.4
1896	11	(a)	-4	-36.4	84.00	(a)	.....	.....	.1144	(a)	+.0035	+3.1
1897	8	(a)	-1	-12.5	84.00	(a)	.....	.....	.1167	(a)	+.0012	+1.0
1898	8	(a)	-1	-12.5	84.00	(a)	.....	.....	.1167	(a)	+.0012	+1.0
1899	6	(a)	+1	+16.7	84.00	(a)	.....	.....	.1125	(a)	+.0054	+4.5
1900	4	(a)	+3	+75.0	84.00	(a)	.....	.....	.1125	(a)	+.0054	+4.5
1901	4	(a)	+3	+75.0	84.00	(a)	.....	.....	.1125	(a)	+.0054	+4.5
1902	3	(a)	+4	+133.3	84.00	(a)	.....	.....	.1139	(a)	+.0040	+3.5
1903	7	(a)	.....	.....	84.00	(a)	.....	.....	.1179	(a)	.....	.....

FILTER MEN, Male.

[No data, 1890-1893; data from establishment, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	84	(a)	+66	+78.6	84.00	(a)	.....	.....	\$0.1275	(a)	-\$0.0117	-9.2
1895	66	(a)	+84	+127.3	84.00	(a)	.....	.....	.1146	(a)	+.0012	+1.0
1896	68	(a)	+82	+120.6	84.00	(a)	.....	.....	.1137	(a)	+.0021	+1.8
1897	45	(a)	+105	+123.3	84.00	(a)	.....	.....	.1272	(a)	+.0114	+9.9
1898	42	(a)	+108	+127.1	84.00	(a)	.....	.....	.1157	(a)	+.0001	+1
1899	51	(a)	+99	+119.1	84.00	(a)	.....	.....	.1147	(a)	+.0011	+1.0
1900	59	(a)	+91	+108.3	84.00	(a)	.....	.....	.1168	(a)	+.0010	-.9
1901	76	(a)	+74	+88.1	84.00	(a)	.....	.....	.1174	(a)	+.0016	+1.4
1902	73	(a)	+77	+91.7	84.00	(a)	.....	.....	.1156	(a)	+.0002	+2
1903	150	(a)	.....	.....	84.00	(a)	.....	.....	.1158	(a)	.....	.....

FIREMEN, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	129	(a)	-1	-0.8	75.35	(a)	-2.13	-2.8	\$0.1627	(a)	+\$0.0025	+1.5
1895	126	(a)	+2	+1.6	75.21	(a)	-2.02	-2.7	.1639	(a)	+.0013	+.8
1896	131	(a)	-3	-2.3	75.21	(a)	-1.99	-2.6	.1637	(a)	+.0015	+.9
1897	123	(a)	+5	+4.1	74.34	(a)	-1.12	-1.5	.1644	(a)	+.0008	+.5
1898	101	(a)	+27	+26.7	73.43	(a)	-.21	-.3	.1654	(a)	-.0002	-.1
1899	104	(a)	+24	+23.1	73.50	(a)	-.28	-.4	.1641	(a)	+.0011	+.7
1900	103	(a)	+25	+24.3	73.28	(a)	-.06	-.1	.1643	(a)	+.0009	+.5
1901	99	(a)	+29	+29.3	73.58	(a)	-.36	-.5	.1641	(a)	+.0011	+.7
1902	153	(a)	-25	-16.3	73.65	(a)	-.43	-.6	.1639	(a)	+.0015	+.9
1903	128	(a)	.....	.....	73.22	(a)	.....	.....	.1632	(a)	.....	.....

LABORERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	2,147	(a)	-345	-16.1	71.87	(a)	-2.47	-3.4	\$0.1515	(a)	+\$0.0036	+2.4
1895	1,789	(a)	+13	+ .7	70.35	(a)	-.95	-1.4	.1522	(a)	+.0029	+1.9
1896	1,897	(a)	-95	-5.0	69.82	(a)	-.42	-.6	.1537	(a)	+.0014	+.9
1897	1,596	(a)	+206	+12.9	70.92	(a)	-1.62	-2.1	.1508	(a)	+.0043	+2.9
1898	1,382	(a)	+420	+30.4	69.63	(a)	-.19	-.2	.1550	(a)	+.0001	+.1
1899	1,427	(a)	+375	+26.3	69.58	(a)	-.18	-.3	.1541	(a)	+.0010	+.6
1900	1,432	(a)	+370	+25.8	68.93	(a)	+.47	+.7	.1539	(a)	-.0008	-.5
1901	1,596	(a)	+206	+12.9	70.41	(a)	-1.01	-1.4	.1518	(a)	+.0032	+2.2
1902	1,895	(a)	-93	-4.9	70.45	(a)	-1.05	-1.5	.1513	(a)	+.0038	+2.6
1903	1,802	(a)	.....	.....	69.40	(a)	.....	.....	.1551	(a)	.....	.....

Not or

reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SUGAR REFINING—Concluded.

WATER TENDERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	23	(a)	+8	+34.8	72.52	(a)	+2.58	+3.6	\$0.2025	(a)	-\$0.0162	-8.0
1895	24	(a)	+7	+29.2	73.50	(a)	+1.60	+2.2	.1970	(a)	-.0107	-5.4
1896	23	(a)	+8	+34.8	73.04	(a)	+2.06	+2.8	.1996	(a)	-.0133	-6.7
1897	22	(a)	+9	+40.9	72.55	(a)	+2.55	+3.5	.2024	(a)	-.0161	-8.0
1898	23	(a)	+8	+34.8	73.04	(a)	+2.06	+2.8	.1996	(a)	-.0133	-6.7
1899	23	(a)	+8	+34.8	73.57	(a)	+1.53	+2.1	.1991	(a)	-.0128	-6.4
1900	22	(a)	+9	+40.9	73.09	(a)	+2.01	+2.8	.2019	(a)	-.0156	-7.7
1901	27	(a)	+4	+14.8	73.78	(a)	+1.32	+1.8	.1957	(a)	-.0094	-4.8
1902	26	(a)	+5	+19.2	72.92	(a)	+2.18	+3.0	.2018	(a)	-.0155	-7.7
1903	31	(a)	.....	.....	75.10	(a)	.....	.....	.1863	(a)	.....	.....

WEIGHERS, Male.

[No data, 1890-1893; data from 2 establishments, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	31	(a)	-1	-3.2	73.94	(a)	-1.94	-2.6	\$0.1725	(a)	+\$0.0386	+22.4
1895	35	(a)	-5	-14.3	75.77	(a)	-3.77	-5.0	.1625	(a)	+.0486	+29.9
1896	33	(a)	-3	-9.1	73.09	(a)	-1.09	-1.5	.1748	(a)	+.0363	+20.8
1897	36	(a)	-6	-16.7	74.67	(a)	-2.67	-3.6	.1778	(a)	+.0333	+18.7
1898	26	(a)	+4	+15.4	69.23	(a)	+2.77	+4.0	.1931	(a)	+.0180	+9.3
1899	30	(a)	.....	.....	72.00	(a)	.....	.....	.1861	(a)	+.0250	+13.4
1900	27	(a)	+3	+11.1	70.67	(a)	+1.33	+1.9	.2096	(a)	+.0015	+.7
1901	25	(a)	+5	+20.0	68.64	(a)	+3.36	+4.9	.2167	(a)	+.0066	+2.6
1902	24	(a)	+6	+25.0	68.00	(a)	+4.00	+5.9	.2188	(a)	-.0077	-3.5
1903	30	(a)	.....	.....	72.00	(a)	.....	.....	.2111	(a)	.....	.....

WEIGHERS, SAMPLERS, AND TALLYMEN, RAW SUGAR, Male.

[No data, 1890-1893; data from 1 establishment, 1894-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1894	41	(a)	-7	-17.1	60.00	(a)	.....	.....	\$0.2142	(a)	+\$0.0363	+16.9
1895	41	(a)	-7	-17.1	60.00	(a)	.....	.....	.2144	(a)	+.0361	+16.8
1896	41	(a)	-7	-17.1	60.00	(a)	.....	.....	.2187	(a)	+.0318	+14.5
1897	42	(a)	-8	-19.0	60.00	(a)	.....	.....	.2159	(a)	+.0346	+16.0
1898	39	(a)	-6	-12.8	60.00	(a)	.....	.....	.2197	(a)	+.0308	+14.0
1899	37	(a)	-3	-8.1	60.00	(a)	.....	.....	.2187	(a)	+.0316	+14.5
1900	34	(a)	.....	.....	60.00	(a)	.....	.....	.2218	(a)	+.0287	+12.9
1901	34	(a)	.....	.....	60.00	(a)	.....	.....	.2221	(a)	+.0284	+12.8
1902	33	(a)	+1	+3.0	60.00	(a)	.....	.....	.2586	(a)	-.0081	-3.1
1903	34	(a)	.....	.....	60.00	(a)	.....	.....	.2505	(a)	.....	.....

TIN PLATE.

ASSORTERS, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	3	(a)	.....	.....	56.67	(a)	.....	.....	\$0.3333	(a)	-\$0.0333	-25.0
1894	3	(a)	.....	.....	56.67	(a)	.....	.....	.3000	(a)	-.0300	-16.7
1895	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1896	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1897	2	(a)	+1	+50.0	57.00	(a)	-0.33	-0.6	.2500	(a)	.....	.....
1898	2	(a)	+1	+50.0	57.00	(a)	-.33	-.6	.2500	(a)	.....	.....
1899	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1900	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1901	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1902	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....
1903	3	(a)	.....	.....	56.67	(a)	.....	.....	.2500	(a)	.....	.....

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 716.]

TIN PLATE—Continued.

CATCHERS, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	6	(a)	+3	+ 50.0	56.83	(a)	-0.05	-0.1	\$0.1167	(a)	+\$0.0083	+ 7.1
1894	5	(a)	+4	+ 80.0	56.80	(a)	- .02	- .04	.1167	(a)	+ .0083	+ 7.1
1895	4	(a)	+5	+125.0	56.75	(a)	+ .03	+ .1	.1167	(a)	+ .0083	+ 7.1
1896	6	(a)	+3	+ 50.0	56.83	(a)	- .05	- .1	.1083	(a)	+ .0167	+15.4
1897	8	(a)	+1	+ 12.5	56.75	(a)	+ .03	+ .1	.1042	(a)	+ .0208	+20.0
1898	8	(a)	+1	+ 12.5	56.75	(a)	+ .03	+ .1	.1042	(a)	+ .0208	+20.0
1899	9	(a)	.....	.....	56.78	(a)	.....	.....	.1093	(a)	+ .0157	+14.4
1900	9	(a)	.....	.....	56.78	(a)	.....	.....	.1056	(a)	+ .0194	+18.6
1901	10	(a)	-1	- 10.0	56.80	(a)	- .02	- .04	.1067	(a)	+ .0183	+17.2
1902	9	(a)	.....	.....	56.78	(a)	.....	.....	.1139	(a)	+ .0111	+ 9.7
1903	9	(a)	.....	.....	56.78	(a)	.....	.....	.1250	(a)	.....	.....

DUSTERS, Female.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	11	(a)	+10	+ 71.4	56.79	(a)	-0.04	-0.1	\$0.0833	(a)	+\$0.0049	+5.9
1894	17	(a)	+7	+ 41.2	56.76	(a)	- .01	- .02	.0833	(a)	+ .0049	+5.9
1895	15	(a)	+9	+ 60.0	56.73	(a)	+ .02	+ .04	.0834	(a)	+ .0048	+5.9
1896	9	(a)	+15	+166.7	56.78	(a)	- .03	- .1	.0833	(a)	+ .0049	+5.9
1897	12	(a)	+12	+100.0	56.75	(a)	.....	.....	.0833	(a)	+ .0049	+5.9
1898	16	(a)	+8	+ 50.0	56.75	(a)	.....	.....	.0833	(a)	+ .0049	+5.9
1899	10	(a)	+14	+140.0	56.80	(a)	- .05	- .1	.0833	(a)	+ .0049	+5.9
1900	15	(a)	+9	+ 60.0	56.73	(a)	+ .02	+ .04	.0833	(a)	+ .0049	+5.9
1901	24	(a)	.....	.....	56.75	(a)	.....	.....	.0833	(a)	+ .0049	+5.9
1902	27	(a)	-3	- 11.1	56.74	(a)	+ .01	+ .02	.0871	(a)	+ .0011	+1.3
1903	24	(a)	.....	.....	56.75	(a)	.....	.....	.0882	(a)	.....	.....

LABORERS, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	12	(a)	+2	+ 16.7	56.75	(a)	+0.04	+0.1	\$0.1625	(a)	-\$0.0089	-5.5
1894	5	(a)	+9	+180.0	56.80	(a)	- .01	- .02	.1500	(a)	+ .0036	+2.4
1895	15	(a)	-1	- 6.7	56.73	(a)	+ .05	+ .1	.1600	(a)	- .0064	-4.0
1896	6	(a)	+8	+133.3	56.83	(a)	- .04	- .1	.1584	(a)	- .0048	-3.0
1897	7	(a)	+7	+100.0	56.71	(a)	+ .08	+ .1	.1524	(a)	+ .0012	+ .8
1898	6	(a)	+8	+133.3	56.83	(a)	- .04	- .1	.1528	(a)	+ .0006	+ .4
1899	6	(a)	+8	+133.3	56.83	(a)	- .04	- .1	.1500	(a)	+ .0036	+2.4
1900	11	(a)	+3	+ 27.3	56.73	(a)	+ .06	+ .1	.1500	(a)	+ .0036	+2.4
1901	15	(a)	-1	- 6.7	56.73	(a)	+ .06	+ .1	.1500	(a)	+ .0036	+2.4
1902	14	(a)	.....	.....	56.79	(a)	.....	.....	.1500	(a)	+ .0036	+2.4
1903	14	(a)	.....	.....	56.79	(a)	.....	.....	.1536	(a)	.....	.....

PICKLERS, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

Year.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1893	1	(a)	.....	.....	57.00	(a)	.....	.....	\$0.2500	(a)	+\$0.0500	+20.0
1894	1	(a)	.....	.....	57.00	(a)	.....	.....	.2500	(a)	+ .0500	+20.0
1895	1	(a)	.....	.....	57.00	(a)	.....	.....	.2500	(a)	+ .0500	+20.0
1896	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .1000	+40.0
1897	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .1000	+40.0
1898	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6
1899	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6
1900	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6
1901	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6
1902	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6
1903	1	(a)	.....	.....	57.00	(a)	.....	.....	.2000	(a)	+ .0667	+26.6

* Not computed, as data reported too low

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

ge 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TIN PLATE—Concluded.

TINMEN, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

r.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
0-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
11	(a)	(a)	-5	-45.5	56.73	(a)	+0.10	+0.2	\$0.3291	(a)	+\$0.0701	+21.3
10	(a)	(a)	-4	-40.0	56.80	(a)	+ .03	+ .1	.3646	(a)	+ .0346	+ 9.5
4	(a)	(a)	+2	+50.0	56.75	(a)	+ .08	+ .1	.3802	(a)	+ .0190	+ 5.0
3	(a)	(a)	+3	+100.0	56.67	(a)	+ .16	+ .3	.2866	(a)	+ .1126	+39.3
3	(a)	(a)	+3	+100.0	56.67	(a)	+ .16	+ .3	.3684	(a)	+ .0308	+ 8.4
5	(a)	(a)	+1	+20.0	56.80	(a)	+ .03	+ .1	.3835	(a)	+ .0157	+ 4.1
5	(a)	(a)	+1	+20.0	56.80	(a)	+ .03	+ .1	.3450	(a)	+ .0542	+15.7
7	(a)	(a)	-1	-14.3	56.71	(a)	+ .12	+ 2	.3268	(a)	+ .0024	+ .6
6	(a)	(a)	.....	.....	56.83	(a)	.....	.....	.3809	(a)	+ .0183	+ 4.8
6	(a)	(a)	.....	.....	56.83	(a)	.....	.....	.3984	(a)	+ .0008	+ .2
6	(a)	(a)	.....	.....	56.83	(a)	.....	.....	.3992	(a)	.....	.....

WASH MEN, Male.

[No data, 1890-1892; data from 1 establishment, 1893-1903.]

0-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
3	(a)	(a)	+3	+100.0	56.67	(a)	+0.16	+0.3	\$0.2262	(a)	+\$0.0644	+28.5
3	(a)	(a)	+3	+100.0	56.67	(a)	+ .16	+ .3	.2297	(a)	+ .0609	+26.5
3	(a)	(a)	+3	+100.0	56.67	(a)	+ .16	+ .3	.3059	(a)	+ .0153	+ 5.0
3	(a)	(a)	+3	+100.0	56.67	(a)	+ .16	+ .3	.2509	(a)	+ .0397	+15.8
4	(a)	(a)	+2	+50.0	56.75	(a)	+ .08	+ .1	.2634	(a)	+ .0272	+10.3
4	(a)	(a)	+2	+50.0	56.75	(a)	+ .08	+ .1	.3104	(a)	+ .0198	+ 6.4
7	(a)	(a)	-1	-14.3	56.71	(a)	+ .12	+ 2	.2600	(a)	+ .0306	+11.8
6	(a)	(a)	.....	.....	56.83	(a)	.....	.....	.3151	(a)	+ .0245	+ 7.8
7	(a)	(a)	-1	-14.3	56.71	(a)	+ .12	+ 2	.3041	(a)	+ .0135	+ 4.4
7	(a)	(a)	-1	-14.3	56.71	(a)	+ .12	+ 2	.3140	(a)	+ .0234	+ 7.5
6	(a)	(a)	.....	.....	56.83	(a)	.....	.....	.2906	(a)	.....	.....

TOBACCO, CIGARETTES.

CIGARETTE MACHINE FREDDERS, Male.

for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890-1896; 2 establishments, 1897-1903.]

0-99.	26	100.0	+30	+115.4	60.00	100.0	.....	.....	\$0.0745	100.0	+\$0.0002	+0.3
25	95.2	+31	+124.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
25	96.2	+31	+124.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
25	96.2	+31	+124.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
26	100.0	+30	+115.4	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
28	107.7	+28	+100.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
25	96.2	+31	+124.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
28	107.7	+28	+100.0	60.00	100.0	.....	.....	.....	.0750	100.7	+ .0003	+ .4
28	107.7	+28	+100.0	60.00	100.0	.....	.....	.....	.0735	98.7	+ .0012	+1.6
28	107.7	+28	+100.0	60.00	100.0	.....	.....	.....	.0739	99.2	+ .0008	+1.1
26	100.0	+30	+115.4	60.00	100.0	.....	.....	.....	.0723	97.0	+ .0024	+3.3
26	100.0	+30	+115.4	60.00	100.0	.....	.....	.....	.0733	98.4	+ .0014	+1.9
37	142.3	+19	+51.4	69.00	100.0	.....	.....	.....	.0766	102.8	+ .0019	+2.5
35	134.6	+21	+60.0	69.00	100.0	.....	.....	.....	.0780	104.7	+ .0033	+4.2
56	215.4	.....	.....	60.00	100.0	.....	.....	.....	.0747	100.3	.....	.....

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 715.]

TOBACCO, CIGARETTES—Continued.

CIGARETTE MACHINE FEEDERS, Female.

[Data from 1 establishment.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	23	100.0	+2	+ 8.7	57.25	100.0	-0.01	-0.02	\$0.0943	100.0	+\$0.0105	-11.7
1890	20	87.0	+5	+25.0	57.25	100.0	-0.01	-0.02	.0873	92.6	+0.0175	-29.0
1891	20	87.0	+6	+25.0	57.25	100.0	-0.01	-0.02	.0873	92.6	+0.0175	-29.0
1892	21	91.3	+4	+19.0	57.24	100.0	-0.01	-0.02	.0873	92.6	+0.0175	-29.0
1893	22	95.7	+3	+13.6	57.27	100.0	-0.03	-1	.0873	92.6	+0.0175	-29.0
1894	22	95.7	+3	+13.6	57.27	100.0	-0.03	-1	.0873	92.6	+0.0175	-29.0
1895	24	104.3	+1	+4.2	57.25	100.0	-0.01	-0.02	.0873	92.6	+0.0175	-29.0
1896	24	104.3	+1	+4.2	57.25	100.0	-0.01	-0.02	.0873	111.1		
1897	25	108.7			57.24	100.0			.1048	111.1		
1898	25	108.7			57.24	100.0			.1048	111.1		
1899	25	108.7			57.24	100.0			.1048	111.1		
1900	27	117.4	-2	-7.4	57.26	100.0	-0.02	-0.03	.1018	111.1		
1901	25	108.7			57.24	100.0			.1048	111.1		
1902	25	108.7			57.24	100.0			.1048	111.1		
1903	25	108.7			57.21	100.0			.1048	111.1		

CIGARETTE MACHINE OPERATORS, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1896; 3 establishments, 1897-1903.]

Av. 1890-99.	38	100.0	+14	+36.8	59.25	100.0	+0.15	+0.3	\$0.1171	100.0	+\$0.0262	-2.4
1890	34	89.5	+18	+52.9	59.26	100.0	+0.14	+0.2	.1029	87.9	+0.0401	-39.3
1891	35	92.1	+17	+48.6	59.23	100.0	+0.17	+0.3	.1044	89.2	+0.0399	-37.1
1892	35	92.1	+17	+48.6	59.14	99.8	+0.26	+0.4	.1066	91.0	+0.0367	-34.6
1893	37	97.4	+15	+40.5	59.19	99.9	+0.21	+0.4	.1053	89.9	+0.0360	-36.1
1894	37	97.4	+15	+40.5	59.11	99.8	+0.29	+0.5	.1186	101.3	+0.0247	-30.8
1895	37	97.4	+15	+40.5	59.11	99.8	+0.29	+0.5	.1186	101.3	+0.0247	-30.8
1896	39	102.6	+13	+33.3	59.15	99.8	+0.25	+0.4	.1168	99.7	+0.0265	-27.9
1897	40	105.3	+12	+30.0	59.46	100.4	-0.06	-1	.1302	111.2	+0.0131	-10.1
1898	41	107.9	+11	+26.8	59.45	100.3	-0.05	-1	.1338	114.3	+0.0085	-7.1
1899	47	123.7	+6	+10.6	59.44	100.3	-0.04	-1	.1334	113.9	+0.0099	-7.4
1900	50	131.6	+2	+4.0	59.40	100.3			.1363	116.4	+0.0070	-5.1
1901	51	134.2	+1	+2.0	59.33	100.1	+0.07	+1	.1401	119.6	+0.0032	-2.3
1902	45	118.4	-7	-15.6	59.29	100.1	+0.11	+2	.1484	126.7	+0.0061	-3.6
1903	52	136.8			59.40	100.3			.1433	122.4		

CIGARETTE MACHINE OPERATORS, Female.

[Data from 1 establishment.]

Av. 1890-99.	25	100.0	+2	+ 8.7	57.25	100.0	-0.01	-0.02	\$0.1362	100.0	+\$0.0210	-15.4
1890	20	87.0	+5	+25.0	57.25	100.0	-0.01	-0.02	.1223	89.8	+0.0349	-28.5
1891	20	87.0	+5	+25.0	57.25	100.0	-0.01	-0.02	.1223	89.8	+0.0349	-28.5
1892	21	91.3	+4	+19.0	57.24	100.0			.1223	89.8	+0.0349	-28.5
1893	22	95.7	+3	+13.6	57.27	100.0	-0.03	-1	.1223	89.8	+0.0349	-28.5
1894	22	95.7	+3	+13.6	57.27	100.0	-0.03	-1	.1397	102.6	+0.0175	-12.5
1895	24	104.3	+1	+4.2	57.25	100.0	-0.01	-0.02	.1397	102.6	+0.0175	-12.5
1896	24	104.3	+1	+4.2	57.25	100.0	-0.01	-0.02	.1397	102.6	+0.0175	-12.5
1897	25	108.7			57.24	100.0			.1397	102.6	+0.0175	-12.5
1898	25	108.7			57.24	100.0			.1572	115.4		
1899	25	108.7			57.24	100.0			.1572	115.4		
1900	25	108.7			57.24	100.0			.1572	115.4		
1901	25	108.7			57.24	100.0			.1572	115.4		
1902	25	108.7			57.21	100.0			.1572	115.4		
1903	25	108.7			57.21	100.0			.1572	115.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, CIGARETTES—Concluded.

PACKING MACHINE FEEDERS, Female.

[No data, 1890-1898; data from 1 establishment, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1899	6	(a)	+10	+166.7	60.00	(a)	.....	.....	\$0.0667	(a)	+\$0.0057	+ 8.5
1900	5	(a)	+11	+220.0	60.00	(a)	.....	.....	.0667	(a)	+ .0057	+ 8.5
1901	13	(a)	+3	+23.1	60.00	(a)	.....	.....	.0731	(a)	- .0007	-10.0
1902	10	(a)	+6	+60.0	60.00	(a)	.....	.....	.0717	(a)	+ .0007	+10.0
1903	16	(a)	.....	.....	60.00	(a)	.....	.....	.0724	(a)	.....	.....

PACKING MACHINE OPERATORS, Female.

[No data, 1890-1898; data from 1 establishment, 1899-1903.]

Av. 1890-99.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1899	10	(a)	+3	+30.0	60.00	(a)	.....	.....	\$0.0833	(a)	.....	.....
1900	10	(a)	+3	+30.0	60.00	(a)	.....	.....	.0833	(a)	.....	.....
1901	17	(a)	-4	-23.5	60.00	(a)	.....	.....	.0833	(a)	.....	.....
1902	11	(a)	+2	+18.2	60.00	(a)	.....	.....	.0833	(a)	.....	.....
1903	13	(a)	.....	.....	60.00	(a)	.....	.....	.0833	(a)	.....	.....

TOBACCO, CIGARS.

BUNCH MAKERS, HAND, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 2 establishments, 1890-1895; 1 establishment, 1896-1903.]

Av. 1890-99.	43	100.0	+15	+ 34.9	57.23	100.0	+2.77	+ 4.8	\$0.1676	100.0	+\$0.0287	+17.1
1890	32	74.4	+26	+ 81.3	56.93	99.5	+3.07	+ 5.4	.1657	98.9	+ .0306	+18.5
1891	35	81.4	+23	+ 53.7	56.24	98.3	+3.76	+ 6.7	.1551	92.5	+ .0412	+26.6
1892	28	65.1	+30	+107.1	53.42	93.3	+6.58	+12.3	.1412	84.2	+ .0551	+39.0
1893	35	81.4	+23	+ 53.7	53.12	96.3	+4.88	+ 8.9	.1381	112.2	+ .0062	+ 4.4
1894	44	102.3	+14	+ 31.8	55.23	96.5	+4.77	+ 8.6	.1708	101.9	+ .0255	+14.9
1895	37	86.0	+21	+ 56.8	55.40	96.8	+4.60	+ 8.3	.1630	97.3	+ .0353	+20.4
1896	38	88.4	+20	+ 52.6	60.00	104.8	.....	.....	.1685	100.5	+ .0278	+16.5
1897	52	120.9	+6	+11.5	60.00	104.8	.....	.....	.1902	113.5	+ .0061	+ 3.2
1898	55	127.9	+3	+ 5.5	60.00	104.8	.....	.....	.1682	100.4	+ .0281	+16.7
1899	69	160.5	-11	- 15.9	60.00	104.8	.....	.....	.1650	98.5	+ .0313	+19.0
1900	12	27.9	+46	+383.3	60.00	104.8	.....	.....	.1677	100.1	+ .0286	+17.1
1901	39	90.7	+19	+48.7	60.00	104.8	.....	.....	.1797	107.2	+ .0166	+ 9.2
1902	44	102.3	+14	+ 31.8	60.00	104.8	.....	.....	.1705	101.7	+ .0258	+15.1
1903	58	134.9	.....	.....	60.00	104.8	.....	.....	.1963	117.1	.....	.....

BUNCH MAKERS, HAND, Female.

[Data for employees from 6 establishments for entire period. Data for hours and wages from 6 establishments, 1890-1896; 7 establishments, 1896-1903.]

Av. 1890-99.	219	100.0	+25	+10.0	55.59	100.0	+0.11	+0.2	\$0.1457	100.0	+\$0.0368	+25.3
1890	223	89.6	+51	+22.9	55.59	100.0	+ .11	+ .2	.1415	97.1	+ .0410	+29.0
1891	225	90.4	+49	+21.8	55.72	100.2	- .02	- .04	.1459	100.1	+ .0366	+25.1
1892	210	84.3	+64	+30.5	55.28	99.4	+ .42	+ .8	.1430	99.4	+ .0395	+27.6
1893	227	91.2	+47	+20.7	56.10	100.9	- .40	- .7	.1448	98.1	+ .0377	+26.0
1894	252	101.2	+22	+ 8.7	56.34	101.3	- .64	-1.1	.1455	99.9	+ .0370	+25.4
1895	236	91.8	+38	+16.1	56.25	101.2	- .55	-1.0	.1428	98.0	+ .0397	+27.6
1896	231	92.8	+43	+18.6	55.08	99.1	+ .62	+1.1	.1469	100.8	+ .0356	+24.2
1897	292	117.3	-18	- 6.2	54.94	98.8	+ .76	+1.4	.1570	107.8	+ .0255	+16.2
1898	271	108.8	+3	+ 1.1	55.06	99.0	+ .64	+1.2	.1482	101.7	+ .0343	+23.1
1899	321	128.9	-47	-14.6	55.58	99.9	+ .17	+ .3	.1418	97.3	+ .0407	+28.7
1900	151	60.6	+123	+81.5	51.86	93.8	+3.84	+7.4	.1339	91.9	+ .0486	+36.3
1901	225	90.4	+49	+21.8	53.93	97.0	+1.77	+3.3	.1520	104.3	+ .0305	+20.1
1902	242	97.2	+32	+13.2	55.21	99.3	+ .49	+ .9	.1474	101.2	+ .0351	+23.8
1903	274	110.0	.....	.....	55.70	100.2	.....	.....	.1625	125.3	.....	.....

* Not computed, as data reported do not cover entire base period.

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 716.]

TOBACCO, CIGARS—Continued.

BUNCH MAKERS, MACHINE, Female.

[Data from 3 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	135	100.0	+ 95	+ 70.4	59.40	100.0	-0.42	-0.7	\$0.1090	100.0	+\$0.0149	+13.7
1890	101	74.8	+129	+127.7	59.82	100.7	- .84	-1.4	.1110	101.8	+ .0129	+11.6
1891	108	80.0	+122	+113.0	59.83	100.7	- .85	-1.4	.1112	102.0	+ .0127	+11.4
1892	118	87.4	+112	+ 94.9	59.85	100.8	- .87	-1.5	.1129	103.6	+ .0110	+ 9.7
1893	106	78.5	+124	+117.0	59.83	100.7	- .85	-1.4	.1102	101.1	+ .0137	+12.4
1894	125	92.6	+105	+ 84.0	59.86	100.8	- .88	-1.5	.1036	95.0	+ .0208	+19.5
1895	182	134.8	+ 48	+ 25.4	59.90	100.8	- .92	-1.5	.1044	95.8	+ .0196	+18.7
1896	129	95.6	+101	+ 78.5	58.74	98.9	+ .24	+ .4	.1055	96.8	+ .0184	+17.4
1897	189	140.0	+ 41	+ 21.7	58.97	99.3	+ .01	+ .02	.1044	95.8	+ .0195	+18.7
1898	135	100.0	+ 95	+ 70.4	58.49	98.5	+ .49	+ .8	.1134	104.0	+ .0105	+ 9.5
1899	152	112.6	+ 78	+ 51.3	58.73	98.9	+ .25	+ .4	.1138	104.4	+ .0101	+ 8.9
1900	182	134.8	+ 48	+ 25.4	58.88	99.1	+ .10	+ .2	.1184	108.6	+ .0055	+ 4.6
1901	201	148.9	+ 29	+ 14.4	58.86	99.1	+ .12	+ .2	.1147	105.2	+ .0092	+ 8.0
1902	220	163.0	+ 10	+ 4.5	58.98	99.3			.1236	113.4	+ .0003	+ .2
1903	230	170.4			58.98	99.3			.1239	113.7		

CIGAR MAKERS, Male.

[Data from 9 establishments.]

Av. 1890-99.	432	100.0	+118	+27.3	53.99	100.0	+2.89	+5.4	\$0.2630	100.0	+\$0.0209	+7.9
1890	361	83.6	+189	+52.4	52.88	97.9	+4.00	+7.6	.2703	102.8	+ .0136	+5.6
1891	439	101.6	+111	+25.3	52.05	96.4	+4.83	+9.3	.2846	108.2	+ .0007	+ .2
1892	457	105.8	+ 93	+20.4	53.59	99.3	+3.29	+6.1	.2786	105.9	+ .0053	+1.9
1893	628	145.4	- 78	-12.4	51.42	100.8	+2.46	+4.5	.2661	101.2	+ .0178	+6.7
1894	621	143.6	+ 29	+ 5.6	53.70	99.5	+3.18	+5.9	.2644	100.5	+ .0195	+7.4
1895	478	110.6	+ 72	+15.1	53.42	98.9	+3.46	+6.5	.2695	99.0	+ .0234	+9.0
1896	390	90.3	+160	+41.0	55.47	102.7	+1.41	+2.5	.2471	91.0	+ .0364	+14.9
1897	301	69.7	+249	+82.7	53.30	98.7	+3.58	+6.7	.2545	96.8	+ .0294	+11.6
1898	305	70.6	+245	+80.3	51.75	101.4	+2.13	+3.9	.2431	92.4	+ .0406	+16.5
1899	443	102.5	+107	+24.2	56.33	104.3	+ .55	+1.0	.2610	99.2	+ .0229	+8.8
1900	590	136.6	- 40	- 6.8	56.75	105.1	+ .13	+ .2	.2622	99.7	+ .0217	+8.3
1901	753	174.3	-203	-27.0	57.42	106.4	- .54	- .9	.2764	105.1	+ .0075	+2.7
1902	643	125.7	+ 7	+1.3	56.58	104.8	+ .30	+ .5	.2784	105.9	+ .0054	+2.0
1903	650	127.3			56.88	105.4			.2889	107.9		

CIGAR ROLLERS, HAND, Male.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 7 establishments, 1890-1895; 5 establishments, 1896, 1897; 4 establishments, 1898-1903.]

Av. 1890-99.	199	100.0	-17	- 8.5	53.61	100.0	-0.09	-0.2	\$0.1957	100.0	+\$0.0230	+13.3
1890	185	93.0	- 3	- 1.6	53.15	99.1	+ .37	+ .7	.1990	101.2	+ .0237	+12.0
1891	189	95.0	- 7	- 3.7	53.04	98.9	+ .48	+ .9	.1925	98.4	+ .0292	+13.2
1892	177	88.9	+ 5	+ 2.8	52.17	97.3	+1.35	+2.6	.1897	96.9	+ .0330	+15.9
1893	188	94.5	- 6	- 3.2	52.97	98.8	+ .53	+1.0	.2002	102.3	+ .0215	+10.7
1894	192	96.5	-10	- 5.2	53.45	99.7	+ .07	+ .1	.1942	99.2	+ .0275	+14.2
1895	197	99.0	-15	- 7.6	53.21	99.3	+ .31	+ .6	.1938	100.1	+ .0259	+13.2
1896	190	95.5	- 8	- 4.2	53.97	100.7	- .15	- .8	.1959	100.1	+ .0256	+13.2
1897	222	111.6	-40	-18.0	51.70	102.0	- .18	-2.2	.1936	98.9	+ .0261	+14.5
1898	221	111.1	-39	-17.6	51.56	101.8	- .04	-1.9	.1967	100.5	+ .0250	+12.7
1899	233	117.1	-51	-21.9	51.83	102.3	- .31	-2.4	.2001	102.2	+ .0216	+10.8
1900	143	71.9	+39	+17.3	51.69	96.4	+1.83	+3.5	.2014	102.9	+ .0208	+10.1
1901	173	86.9	+ 9	+ 5.2	53.06	99.0	+ .46	+ .9	.2220	113.4	+ .0003	+ .1
1902	181	91.0	+ 1	+ .6	53.30	99.4	+ .22	+ .4	.2296	117.4	+ .0001	+ .3
1903	182	91.5			53.62	99.8			.2217	113.3		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, CIGARS—Continued.

CIGAR ROLLERS, HAND, Female.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 4 establishments, 1890-1895; 6 establishments, 1896, 1897; 7 establishments, 1898-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Average.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	336	100.0	-43	-12.8	53.22	100.0	-1.37	-2.4	\$0.1650	100.0	+\$0.0275	+16.7
1890	295	87.8	-2	-.7	58.83	101.0	-1.98	-3.4	.1645	99.7	+.0280	+17.0
1891	301	89.6	-8	-2.7	58.82	101.0	-1.97	-3.3	.1645	99.7	+.0280	+17.0
1892	259	77.1	+34	+13.1	58.60	100.7	-1.75	-3.0	.1672	101.3	+.0258	+15.1
1893	307	91.4	-14	-4.6	58.70	100.8	-1.85	-3.2	.1631	97.6	+.0314	+19.5
1894	354	105.4	-61	-17.2	58.93	101.2	-2.08	-3.5	.1633	99.0	+.0292	+17.9
1895	327	97.3	-34	-10.4	58.92	101.2	-2.07	-3.5	.1737	105.3	+.0188	+10.8
1896	296	88.1	-3	-1.0	56.94	97.8	-.09	-.2	.1610	97.6	+.0315	+19.6
1897	413	122.9	-120	-29.1	57.41	98.6	-.56	-1.0	.1628	98.7	+.0297	+18.2
1898	390	116.1	-97	-24.9	57.47	98.7	-.62	-1.1	.1627	98.6	+.0296	+18.3
1899	421	125.3	-128	-30.4	57.59	98.9	-.74	-1.3	.1696	102.8	+.0229	+13.5
1900	164	48.8	+129	+78.7	54.52	93.6	+2.33	+4.3	.1470	89.1	+.0455	+31.0
1901	250	74.4	+43	+17.2	55.76	95.8	+1.09	+2.0	.1746	105.8	+.0179	+10.3
1902	277	82.4	+16	+5.8	56.47	97.0	+.38	+.7	.1841	111.6	+.0084	+4.6
1903	293	87.2			55.85	97.6			.1925	116.7		

CIGAR ROLLERS, MACHINE, Female.

[Data from 2 establishments.]

Av. 1890-99.	329	100.0	+345	+104.9	59.74	100.0	-0.19	-0.3	\$0.1181	100.0	+\$0.0045	+29.2
1890	178	54.1	+496	+278.7	60.00	100.4	-.45	-.8	.1234	104.5	+.0292	+23.7
1891	178	54.1	+496	+278.7	60.00	100.4	-.45	-.8	.1246	105.5	+.0280	+22.5
1892	259	78.7	+415	+160.2	60.00	100.4	-.45	-.8	.1232	104.3	+.0294	+23.9
1893	213	64.7	+461	+216.4	60.00	100.4	-.45	-.8	.1272	107.7	+.0254	+20.0
1894	307	93.3	+367	+119.5	60.00	100.4	-.45	-.8	.1290	109.2	+.0234	+18.3
1895	455	138.3	+219	+48.1	60.00	100.4	-.45	-.8	.1139	96.4	+.0387	+34.0
1896	424	128.9	+250	+69.6	59.48	99.6	+.07	+.1	.1086	92.0	+.0440	+40.5
1897	411	124.9	+263	+64.0	59.29	99.2	+.26	+.4	.1120	94.8	+.0406	+36.3
1898	465	141.3	+299	+44.9	59.37	99.4	+.18	+.3	.1085	91.9	+.0441	+40.6
1899	402	122.2	+272	+67.7	59.28	99.2	+.27	+.5	.1108	93.8	+.0418	+37.7
1900	498	151.4	+176	+31.3	59.42	99.5	+.13	+.2	.1270	107.5	+.0256	+20.2
1901	545	165.7	+129	+23.7	59.45	99.5	+.10	+.2	.1629	129.5	-.0003	-.2
1902	672	204.3	+2	+.3	59.55	99.7			.1453	123.0	+.0073	+5.0
1903	674	204.9			59.55	99.7			.1526	129.2		

PACKERS, Male.

[Data for employees from 11 establishments for entire period. Data for hours and wages from 11 establishments, 1890-1892; 12 establishments, 1893-1898; 11 establishments, 1899-1903.]

Av. 1890-99.	129	100.0	-21	-16.3	51.12	100.0	+0.45	+0.8	\$0.3255	100.0	+\$0.0463	+14.2
1890	96	74.4	+12	+12.5	54.27	100.3	+.30	+.6	.2989	91.8	+.0729	+24.4
1891	97	75.2	+11	+11.3	54.21	100.2	+.36	+.7	.3285	100.9	+.0433	+13.2
1892	123	95.3	-15	-12.2	54.46	100.6	+.11	+.2	.3232	99.3	+.0486	+15.0
1893	113	87.6	-5	-4.4	54.39	100.6	+.18	+.3	.3203	98.4	+.0515	+16.1
1894	133	103.1	-25	-18.8	54.32	100.4	+.25	+.5	.3213	98.7	+.0505	+15.7
1895	132	102.3	-24	-18.2	54.41	100.5	+.16	+.3	.3255	100.1	+.0460	+14.1
1896	121	93.8	-13	-10.7	53.67	99.2	+.90	+1.7	.3355	103.1	+.0363	+10.8
1897	152	117.8	-44	-28.9	53.93	99.6	+.64	+1.2	.3283	100.9	+.0433	+13.3
1898	157	121.7	-49	-31.2	53.76	99.3	+.81	+1.5	.3326	102.2	+.0392	+11.8
1899	170	131.8	-62	-36.5	53.80	99.4	+.77	+1.4	.3409	104.7	+.0309	+9.1
1900	94	72.9	+34	+14.9	53.88	99.6	+.69	+1.3	.3405	101.6	+.0313	+9.2
1901	99	76.7	+9	+9.1	53.68	98.9	+1.04	+1.9	.3516	108.0	+.0202	+5.7
1902	122	94.6	-14	-11.5	54.06	99.9	+.51	+.9	.3356	103.1	+.0362	+10.8
1903	108	83.7			54.57	100.8			.3718	114.2		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 72.]

TOBACCO, CIGARS—Concluded.

PACKERS, Female.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1899; 4 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	13	100.0	+3	+23.1	50.05	100.0	+3.48	+7.0	\$0.1511	100.0	-\$0.0212	-14.0
1890	8	61.5	+8	+100.0	50.88	101.7	+2.65	+5.2	.1649	109.1	-.0350	-23.2
1891	12	92.3	+4	+33.8	49.92	99.7	+3.61	+7.2	.1628	107.7	-.0329	-21.8
1892	14	107.7	+2	+14.8	49.64	99.2	+3.89	+7.8	.1649	109.1	-.0350	-23.2
1893	17	130.8	-1	-5.9	49.35	98.6	+4.18	+8.5	.1459	96.6	-.0160	-10.9
1894	15	115.4	+1	+6.7	49.53	99.0	+4.00	+8.1	.1350	89.3	-.0551	-36.4
1895	15	115.4	+1	+6.7	49.53	99.0	+4.00	+8.1	.1353	89.2	-.0554	-36.6
1896	8	61.5	+8	+100.0	50.88	101.7	+2.65	+5.2	.1542	102.1	-.0243	-15.9
1897	13	100.0	+3	+23.1	49.77	99.4	+3.76	+7.6	.1457	96.4	-.0178	-11.7
1898	12	92.3	+4	+33.8	49.92	99.7	+3.61	+7.2	.1541	102.0	-.0242	-15.9
1899	11	84.6	+5	+45.5	51.09	102.1	+2.44	+4.8	.1505	99.6	-.0206	-13.7
1900	15	115.4	+1	+6.7	53.35	106.6	+1.18	+2.3	.1211	80.1	-.0698	-46.2
1901	13	100.0	+3	+23.1	53.38	106.7	+1.19	+2.4	.1765	116.8	-.0466	-30.8
1902	18	138.5	-2	-11.1	53.08	106.1	+1.45	+2.8	.1564	103.5	-.0255	-16.9
1903	16	123.1			53.53	107.0			.1299	86.0		

STEMMERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 4 establishments, 1890-1897, 1899; 3 establishments, 1898, 1900-1903.]

Av. 1890-99.	91	100.0	-25	-26.6	59.96	100.0	+0.04	+0.1	\$0.0909	100.0	+\$0.0380	+41.5
1890	49	52.1	-20	-10.8	59.92	99.9	+1.08	+1.1	.0969	106.6	+.0320	+35.0
1891	71	75.5	-2	-2.8	59.97	100.0	+1.03	+1.1	.0936	103.0	+.0333	+37.7
1892	103	109.6	-34	-33.0	59.95	100.0	+1.06	+1.1	.0868	95.5	+.0421	+44.3
1893	136	144.7	-67	-49.3	59.96	100.0	+1.04	+1.1	.0813	89.4	+.0476	+53.5
1894	98	104.3	-29	-29.6	59.96	100.0	+1.04	+1.1	.0871	95.8	+.0415	+45.9
1895	117	124.5	-48	-41.0	59.95	100.0	+1.05	+1.1	.0835	91.9	+.0454	+50.4
1896	113	120.2	-44	-38.9	59.95	100.0	+1.05	+1.1	.0856	94.2	+.0433	+47.6
1897	53	56.4	+16	+30.2	59.91	99.9	+1.09	+1.2	.0994	109.4	+.0295	+32.7
1898	86	91.5	-17	-19.8	60.00	100.1			.0990	108.9	+.0299	+33.2
1899	114	121.3	-15	-39.5	59.99	100.1	+1.01	+1.02	.0982	108.8	+.0297	+33.0
1900	108	114.9	-39	-36.1	60.00	100.1			.1079	118.7	+.0210	+23.0
1901	57	60.6	12	+21.1	60.00	100.1			.1107	121.8	+.0182	+20.4
1902	68	72.3	+1	+1.5	60.00	100.1			.1021	112.3	+.0268	+29.5
1903	69	73.4			60.00	100.1			.1289	141.8		

STEMMERS, Female.

[Data for employees from 13 establishments for entire period. Data for hours and wages from 14 establishments, 1890, 1891-1896, 1898-1903; 13 establishments, 1891-1893, 1897.]

Av. 1890-99.	412	100.0	-4	+0.9	55.89	100.0	+0.55	-1.0	\$0.0711	100.0	-\$0.0145	-20.4
1890	402	91.0	-11	-10.9	56.40	100.9	-.04	+1.1	.0641	91.2	-.0215	-30.3
1891	453	102.5	-7	-1.5	55.78	99.8	-.66	+1.2	.0630	88.6	-.0226	-31.9
1892	413	93.4	-33	-8.0	56.00	100.2	-.44	+1.1	.0692	97.3	+.0164	+23.7
1893	419	94.8	-27	-6.4	55.05	98.5	-1.39	+2.5	.0671	94.4	+.0185	+26.7
1894	461	104.3	-15	-3.3	55.83	99.9	-.61	+1.1	.0716	100.7	+.0140	+19.6
1895	469	106.1	-23	-4.9	55.50	99.3	-.94	+1.7	.0691	97.2	+.0163	+23.0
1896	407	92.1	-39	-9.6	55.85	99.9	-.59	+1.1	.0732	103.0	+.0124	+17.3
1897	413	100.2	-3	-2.7	55.76	99.8	-.68	+1.2	.0803	112.9	+.0053	+7.4
1898	458	103.6	-12	-2.6	56.27	100.7	-.17	-.3	.0781	109.8	+.0075	+10.6
1899	495	112.0	-19	-3.9	56.47	101.0	-.03	-.1	.0752	105.8	+.0104	+14.6
1900	430	97.3	-16	-3.7	55.76	99.8	-.68	+1.2	.0730	105.5	+.0106	+14.9
1901	434	98.2	-12	-2.8	55.52	99.3	-.92	+1.7	.0853	120.0	+.0003	+0.4
1902	464	105.0	-18	-3.9	55.90	100.0	-.54	+1.0	.0832	117.0	+.0026	+3.6
1903	446	100.9			56.44	101.0			.0856	120.4		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, PLUG, FINE CUT, AND GRANULATED SMOKING.

CASERS, Male.

[Data for employees from 4 establishments for entire period. Data for hours and wages from 4 establishments, 1890, 1891; 6 establishments, 1892-1897; 7 establishments, 1898, 1899; 8 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	11	100.0			59.70	100.0	+0.20	+0.3	\$0.1363	100.0	-\$0.0051	-3.7
1890	11	100.0			60.55	101.4	-.65	-1.1	.1419	104.1	-.0107	-7.5
1891	11	100.0			60.55	101.4	-.65	-1.1	.1419	104.1	-.0107	-7.5
1892	11	100.0			59.36	99.4	+.54	+ .9	.1335	97.9	+.0023	-1.7
1893	11	100.0			59.33	99.4	+.57	+1.0	.1322	97.0	+.0010	-.8
1894	11	100.0			59.34	99.4	+.56	+ .9	.1334	97.9	+.0022	-1.6
1895	11	100.0			59.38	99.6	+.52	+ .9	.1429	104.4	-.0111	-7.8
1896	11	100.0			59.46	99.6	+.44	+ .7	.1422	104.3	-.0110	-7.7
1897	11	100.0			59.58	99.8	+.32	+ .5	.1373	100.7	+.0061	-4.4
1898	11	100.0			59.72	100.0	+.18	+ .3	.1289	94.6	+.0023	+1.8
1899	11	100.0			59.72	100.0	+.18	+ .3	.1290	94.6	+.0022	+1.7
1900	11	100.0			59.92	100.4	-.02	-.03	.1253	91.9	+.0059	+4.7
1901	11	100.0			59.85	100.3	+.05	+ .1	.1271	93.3	+.0041	+8.2
1902	11	100.0			59.89	100.3	+.01	+ .02	.1315	96.5	-.0003	-.2
1903	11	100.0			69.90	100.3			.1312	96.3		

CASERS, Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890, 1891, 1902, 1903; 2 establishments, 1892-1901.]

Av. 1890-99.	4	100.0	+1	+25.0	57.75	100.0	-2.75	-4.8	\$0.1039	100.0	+\$0.0852	+ 82.0
1890	4	100.0	+1	+25.0	55.00	95.2			.1364	131.3	+.0527	+ 38.6
1891	4	100.0	+1	+25.0	55.00	95.2			.1364	131.3	+.0527	+ 38.6
1892	4	100.0	+1	+25.0	58.53	101.4	-3.53	-6.0	.0905	87.1	+.0986	+109.0
1893	4	100.0	+1	+25.0	58.64	101.5	-3.64	-6.2	.0910	87.6	+.0981	+107.8
1894	4	100.0	+1	+25.0	58.62	101.5	-3.62	-6.2	.0915	88.1	+.0976	+106.7
1895	3	75.0	+2	+66.7	58.71	101.7	-3.71	-6.3	.0910	87.6	+.0981	+107.8
1896	4	100.0	+1	+25.0	58.45	101.2	-3.45	-5.9	.0966	93.0	+.0925	+ 95.8
1897	4	100.0	+1	+25.0	58.16	100.7	-3.16	-5.4	.1030	99.1	+.0861	+ 83.6
1898	4	100.0	+1	+25.0	58.30	101.0	-3.30	-5.7	.0982	94.5	+.0909	+ 92.6
1899	5	125.0			58.05	100.5	-3.05	-5.3	.1041	100.2	+.0850	+ 81.7
1900	4	100.0	+1	+25.0	57.00	98.7	-2.00	-3.5	.1274	122.6	+.0617	+ 48.4
1901	5	125.0			56.78	98.3	-1.78	-3.1	.1375	132.3	+.0516	+ 37.5
1902	5	125.0			55.00	95.2			.1836	176.7	+.0055	+ 3.0
1903	5	125.0			55.00	95.2			.1891	182.0		

GRANULATORS, Male.

[Data from 1 establishment.]

Av. 1890-99.	23	100.0	+17	+ 73.9	58.00	100.0			\$0.0885	100.0	-\$0.0052	- 5.9
1890	26	113.0	+14	+ 53.8	58.00	100.0			.0900	101.7	-.0067	- 7.4
1891	24	104.3	+16	+ 66.6	58.00	100.0			.0900	101.7	-.0067	- 7.4
1892	25	108.7	+15	+ 60.0	58.00	100.0			.0900	101.7	-.0067	- 7.4
1893	24	104.3	+16	+ 66.6	58.00	100.0			.0900	101.7	-.0067	- 7.4
1894	24	104.3	+16	+ 66.6	58.00	100.0			.0900	101.7	-.0067	- 7.4
1895	22	95.7	+18	+ 81.8	58.00	100.0			.0900	101.7	-.0067	- 7.4
1896	23	100.0	+17	+ 73.9	58.00	100.0			.0900	101.7	-.0067	- 7.4
1897	20	87.0	+20	+100.0	58.00	100.0			.0900	101.7	-.0067	- 7.4
1898	21	91.3	+19	+ 90.5	58.00	100.0			.0900	101.7	-.0067	- 7.4
1899	20	87.0	+20	+100.0	58.00	100.0			.0750	84.7	+.0085	+11.1
1900	20	87.0	+20	+100.0	58.00	100.0			.0750	84.7	+.0083	+11.1
1901	19	82.6	+21	+110.5	58.00	100.0			.0800	90.4	+.0033	+ 3.1
1902	10	43.5	+30	+300.0	58.00	100.0			.0833	94.1		
1903	40	173.9			58.00	100.0			.0833	94.1		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71.]

TOBACCO, PLUG, FINE CUT, AND GRANULATED SMOKING—Continued.

LUMP MAKERS, HAND, Male.

[Data from 2 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	108	100.0	-22	-20.4	55.17	100.0	-1.43	-2.6	\$0.1411	100.0	+\$0.0047	+3.3
1890	96	88.9	-10	-10.4	55.31	100.3	-1.57	-2.8	.1617	114.6	-.0159	-9.8
1891	115	106.5	-29	-25.2	55.10	99.9	-1.36	-2.5	.1518	107.6	-.0060	-4.0
1892	125	115.7	-39	-31.2	55.01	99.7	-1.27	-2.3	.1327	94.0	-.0131	-9.9
1893	108	100.0	-22	-20.4	55.17	100.0	-1.43	-2.6	.1331	94.3	-.0127	-9.5
1894	111	102.8	-25	-22.5	55.14	99.9	-1.40	-2.5	.1390	98.5	-.0068	-4.9
1895	107	99.1	-21	-19.6	55.18	100.0	-1.44	-2.6	.1411	100.0	-.0047	-3.3
1896	104	96.3	-18	-17.3	55.21	100.1	-1.47	-2.7	.1318	93.4	-.0140	-10.6
1897	101	93.5	-15	-14.9	55.25	100.1	-1.51	-2.7	.1310	92.8	-.0148	-11.3
1898	110	101.9	-24	-21.8	55.15	100.0	-1.41	-2.6	.1435	101.7	-.0023	-1.6
1899	106	98.1	-20	-18.9	55.19	100.0	-1.45	-2.6	.1455	103.1	-.0003	-.2
1900	111	102.8	-25	-22.5	55.14	99.9	-1.40	-2.5	.1603	113.6	-.0145	-10.0
1901	105	97.2	-19	-18.1	55.20	100.1	-1.46	-2.6	.1407	99.7	-.0061	-4.3
1902	97	89.8	-11	-11.2	55.30	100.2	-1.56	-2.8	.1535	108.8	-.0077	-5.0
1903	86	79.6			53.74	97.4			.1458	103.3		

LUMP MAKERS, MACHINE, Male.

[Data from 3 establishments.]

Av. 1890-99.	31	100.0	-1	-3.2	55.42	100.0	-2.09	-3.8	\$0.1352	100.0	+\$0.0495	+36.1
1890	25	80.6	+5	+20.0	55.20	99.6	-1.87	-3.4	.1183	87.5	-.0657	-55.5
1891	26	83.9	+4	+15.4	55.38	99.9	-2.06	-3.7	.1226	90.6	-.0615	-50.2
1892	30	96.8			55.67	100.5	-2.34	-4.2	.1183	87.5	-.0657	-55.5
1893	29	93.5	+1	+3.4	55.52	100.2	-2.19	-3.9	.1324	97.9	-.0516	-30.6
1894	33	106.5	-3	-9.1	55.21	99.6	-1.88	-3.4	.1328	98.2	-.0512	-30.6
1895	31	100.0	-1	-3.2	55.29	99.8	-1.96	-3.5	.1321	97.7	-.0519	-30.3
1896	29	93.5	+1	+3.4	55.38	99.9	-2.06	-3.7	.1354	100.1	-.0495	-36.9
1897	34	109.7	-4	-11.8	55.59	100.3	-2.26	-4.1	.1472	108.9	-.0368	-25.3
1898	38	122.6	-8	-21.1	55.47	100.1	-2.14	-3.9	.1551	114.7	-.0290	-19.6
1899	37	119.4	-7	-18.9	55.51	100.2	-2.18	-3.9	.1579	116.8	-.0261	-16.5
1900	35	112.9	-6	-14.3	55.71	100.5	-2.38	-4.3	.1496	110.8	-.0342	-22.8
1901	35	112.9	-6	-14.3	55.71	100.5	-2.38	-4.3	.1611	119.2	-.0229	-14.2
1902	32	103.2	-2	-6.3	54.38	98.1	-1.06	-1.9	.1801	133.2	-.0089	-6.2
1903	30	96.8			53.33	96.2			.1840	136.1		

LUMP MAKERS, N. S., Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890, 1891; 2 establishments, 1892-1903.]

Av. 1890-99.	2	100.0			59.00	100.0			\$0.1278	100.0	+\$0.0021	+25.1
1890	2	100.0			59.00	100.0			.1060	82.9	-.0509	-39.8
1891	2	100.0			59.60	100.0			.1060	82.9	-.0509	-39.8
1892	1	50.0	+1	+100.0	59.00	100.0			.1462	114.4	-.0137	-9.4
1893	2	100.0			59.00	100.0			.1196	93.6	-.0408	-33.7
1894	3	150.0	-1	-100.0	59.00	100.0			.1330	104.1	-.0269	-19.8
1895	3	150.0	-1	-100.0	59.00	100.0			.1393	109.0	-.0206	-14.9
1896	2	100.0			59.00	100.0			.1321	103.4	-.0278	-21.6
1897	2	100.0			59.00	100.0			.1178	92.2	-.0421	-32.6
1898	2	100.0			59.00	100.0			.1342	105.0	-.0257	-19.7
1899	2	100.0			59.00	100.0			.1441	112.8	-.0158	-11.9
1900	2	100.0			59.00	100.0			.1568	122.7	-.0081	-6.0
1901	2	100.0			59.00	100.0			.1358	106.3	-.0241	-17.7
1902	1	50.0	+1	+100.0	59.00	100.0			.1244	97.3	-.0350	-28.3
1903	2	100.0			59.00	100.0			.1599	125.1		

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, PLUG, FINE CUT, AND GRANULATED SMOKING—Continued.

MIXERS, Male.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 1 establishment, 1890, 1891; 3 establishments, 1892-1897; 4 establishments, 1898; 5 establishments, 1899-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	1	100.0	.....	.....	58.94	100.0	+0.87	+1.5	\$0.1119	100.0	+\$0.0361	+32.3
1890	1	100.0	.....	.....	58.00	98.4	+1.81	+3.1	.1000	89.4	+ .0480	+48.0
1891	1	100.0	.....	.....	58.00	98.4	+1.81	+3.1	.1000	89.4	+ .0480	+48.0
1892	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1176	105.1	+ .0304	+26.9
1893	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1015	90.7	+ .0165	+45.8
1894	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1117	99.8	+ .0363	+32.5
1895	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1161	103.8	+ .0319	+27.5
1896	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1053	94.1	+ .0427	+40.6
1897	1	100.0	.....	.....	59.00	100.1	+ .81	+1.4	.1305	116.6	+ .0175	+13.4
1898	1	100.0	.....	.....	59.64	101.2	+ .17	+ .3	.1204	107.6	+ .0276	+22.9
1899	1	100.0	.....	.....	59.71	101.3	+ .10	+ .2	.1159	103.6	+ .0321	+27.7
1900	1	100.0	.....	.....	59.85	101.5	— .04	— .1	.1476	131.9	+ .0004	+ .3
1901	1	100.0	.....	.....	59.83	101.5	— .02	— .03	.1496	133.7	+ .0016	+ 1.1
1902	1	100.0	.....	.....	59.85	101.5	— .04	— .1	.1483	132.5	+ .0008	+ .2
1903	1	100.0	.....	.....	59.81	101.5	.....	.....	.1480	132.3	.....	.....

PACKERS, Female.

[Data from 1 establishment.]

Av. 1890-99.	9	100.0	— 6	-66.7	59.00	100.0	.....	.....	\$0.0791	100.0	+\$0.0108	+13.0
1890	14	155.6	-11	-78.6	59.00	100.0	.....	.....	.0835	105.6	+ .0069	+ 7.1
1891	11	122.2	-8	-72.7	59.00	100.0	.....	.....	.1050	132.7	+ .0156	+14.9
1892	12	133.3	-9	-75.0	59.00	100.0	.....	.....	.0890	112.6	+ .0004	+ .4
1893	9	100.0	-6	-66.7	59.00	100.0	.....	.....	.0581	73.5	+ .0313	+33.9
1894	10	111.1	-7	-70.0	59.00	100.0	.....	.....	.0615	77.7	+ .0279	+45.4
1895	11	122.2	-8	-72.7	59.00	100.0	.....	.....	.0685	86.6	+ .0209	+30.5
1896	7	77.8	-4	-57.1	59.00	100.0	.....	.....	.0820	103.7	+ .0074	+ 9.0
1897	7	77.8	-4	-57.1	59.00	100.0	.....	.....	.0811	102.5	+ .0083	+10.2
1898	4	44.4	-1	-25.0	59.00	100.0	.....	.....	.0747	94.4	+ .0147	+19.7
1899	5	55.6	-2	-40.0	58.00	100.0	.....	.....	.0879	111.1	+ .0015	+ 1.7
1900	6	66.7	-3	-50.0	59.00	100.0	.....	.....	.0740	93.6	+ .0154	+20.8
1901	4	44.4	-1	-25.0	59.00	100.0	.....	.....	.0858	108.6	+ .0036	+ 4.2
1902	4	44.4	-1	-25.0	59.00	100.0	.....	.....	.0968	109.7	+ .0026	+ 3.0
1903	3	33.3	.....	.....	59.00	100.0	.....	.....	.0894	113.0	.....	.....

PACKING MACHINE OPERATORS, GRANULATED SMOKING TOBACCO, Male.

[No data, 1890-1898; data from 1 establishment, 1899-1903.]

Av. 1890-99.	(n)	(n)	(a)	(a)	(n)	(n)	(n)	(n)	(n)	(n)	(a)	(n)
1899	20	(n)	+ 9	+ 45.0	58.00	(n)	.....	.....	\$0.0963	(n)	+\$0.0358	+37.2
1900	14	(n)	+15	+107.1	58.00	(n)	.....	.....	.0917	(n)	+ .0404	+44.1
1901	21	(n)	+ 8	+ 38.1	58.00	(n)	.....	.....	.0963	(n)	+ .0358	+37.2
1902	26	(n)	+ 3	+ 11.5	58.00	(n)	.....	.....	.1181	(n)	+ .0140	+11.9
1903	29	(n)	.....	.....	58.00	(n)	.....	.....	.1521	(n)	.....	.....

• Not computed, as data reported do not cover entire base period.

TABLE K.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, PLUG, FINE CUT, AND GRANULATED SMOKING—Continued.

PRESS HANDS, PLUG, Male.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890, 1891; 7 establishments, 1892-1897; 8 establishments, 1898; 9 establishments, 1899; 10 establishments, 1900-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average number.	Relative number.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Number.	Per cent.			Number.	Per cent.			Amount.	Per cent.
Av. 1890-99.	111	100.0	+35	+31.5	59.12	100.0	+0.86	+1.5	\$0.1440	100.0	+\$0.0250	+16.6
1890	94	84.7	+52	+55.3	59.22	100.2	+ .76	+1.3	.1170	81.3	+.0539	-40.9
1891	98	88.3	+48	+49.0	59.12	100.0	+ .86	+1.5	.1275	88.5	+.0433	-34.9
1892	101	91.0	+45	+44.6	59.03	99.8	+ .95	+1.6	.1508	104.6	+.0322	-13.4
1893	106	95.5	+40	+37.7	58.98	99.8	+1.00	+1.7	.1507	104.7	+.0291	-12.3
1894	107	96.4	+39	+36.4	59.01	99.8	+ .97	+1.6	.1593	110.6	+.0115	-7.2
1895	115	103.6	+31	+26.0	58.93	99.7	+1.05	+1.8	.1572	109.2	+.0136	+ 8.7
1896	116	104.5	+30	+25.9	59.09	99.9	+ .89	+1.5	.1463	101.6	+.0245	-16.7
1897	126	113.5	+20	+15.9	59.15	100.1	+ .83	+1.4	.1390	96.5	+.0318	+22.9
1898	119	107.2	+27	+22.7	59.29	100.3	+ .69	+1.2	.1456	101.1	+.0252	-17.3
1899	125	112.6	+21	+16.8	59.37	100.4	+ .61	+1.0	.1464	101.7	+.0244	-16.7
1900	142	127.9	+4	+2.8	59.86	101.3	+ .12	+ .2	.1526	106.0	+.0182	-11.9
1901	141	127.0	+5	+3.5	59.84	101.2	+ .14	+ .2	.1609	111.7	+.0059	+ 4.2
1902	135	121.6	+11	+8.1	59.97	101.4	+ .01	+ .02	.1676	116.4	+.0032	+ 1.9
1903	146	131.5			59.98	101.5			.1708	118.6		

SORTERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890, 1891; 4 establishments, 1892-1897; 5 establishments, 1898; 6 establishments, 1899-1903.]

Av. 1890-99.	16	100.0	+4	+25.0	59.29	100.0	+0.34	+0.6	\$0.1530	100.0	-\$0.0014	-0.9
1890	14	87.5	+6	+42.9	59.14	99.7	+ .49	+ .8	.1641	107.3	-.0125	-7.6
1891	14	87.5	+6	+42.9	59.14	99.7	+ .49	+ .8	.1641	107.3	-.0125	-7.6
1892	14	87.5	+6	+42.9	59.10	99.7	+ .53	+ .9	.1586	103.7	-.0070	-4.5
1893	16	100.0	+4	+25.0	59.16	99.8	+ .47	+ .8	.1571	102.7	-.0055	-3.4
1894	15	93.8	+5	+33.3	59.17	99.8	+ .46	+ .8	.1552	101.4	-.0036	-2.3
1895	15	93.8	+5	+33.3	59.17	99.8	+ .46	+ .8	.1524	99.6	-.0008	-.5
1896	17	106.3	+3	+17.6	59.26	99.9	+ .37	+ .6	.1581	103.3	-.0065	-4.1
1897	17	106.3	+3	+17.6	59.29	100.0	+ .34	+ .6	.1587	103.7	-.0071	-4.5
1898	19	118.8	+1	+5.3	59.73	100.7	+ .10	+ .2	.1316	86.0	-.0200	-13.2
1899	19	118.8	+1	+5.3	59.74	100.8	+ .11	+ .2	.1304	85.2	-.0212	-16.3
1900	19	118.8	+1	+5.3	59.75	100.8	+ .12	+ .2	.1332	100.1	-.0016	-1.0
1901	19	118.8	+1	+5.3	59.66	100.6	+ .08	+ .1	.1189	97.3	-.0027	-1.8
1902	19	118.8	+1	+5.3	59.65	100.6	+ .02	+ .03	.1492	97.5	-.0024	-1.6
1903	20	125.0			59.63	100.6			.1516	99.1		

SORTERS, Female.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890, 1891; 6 establishments, 1892-1896; 7 establishments, 1897, 1898; 8 establishments, 1899, 9 establishments, 1900-1903.]

Av. 1890-99.	82	100.0	-2	-2.4	59.98	100.0	+1.66	+2.8	\$0.0652	100.0	+\$0.0078	+11.5
1890	83	101.2	-3	-3.6	59.41	99.0	+2.23	+3.8	.0573	87.9	+.0154	+26.9
1891	81	98.8	-1	-1.2	59.60	99.4	+2.04	+3.4	.0607	93.1	+.0120	+19.4
1892	78	95.1	+2	+2.6	59.45	99.1	+2.19	+3.7	.0712	109.2	+.0015	+2.1
1893	80	97.6			59.24	98.8	+2.40	+4.1	.0717	110.0	+.0010	+1.4
1894	87	106.1	-7	-8.0	59.15	98.6	+2.49	+4.2	.0899	107.2	+.0025	+4.0
1895	93	113.4	-13	-14.0	59.22	98.7	+2.42	+4.1	.0896	106.7	+.0031	+4.5
1896	90	109.8	-10	-11.1	59.16	98.6	+2.48	+4.2	.0713	109.4	+.0014	+2.0
1897	82	100.0	-2	-2.4	61.61	102.7	+ .03	+ .05	.0606	92.9	+.0121	+20.0
1898	80	97.6			60.97	101.7	+ .67	+1.1	.0639	98.0	+.0088	+13.8
1899	66	80.5	+14	+21.2	62.00	103.4	+ .36	+ .6	.0559	85.6	+.0169	+26.3
1900	83	101.2	-3	-3.6	61.12	101.9	+ .82	+ .9	.0687	105.4	+.0049	+7.5
1901	77	93.9	+8	+8.9	61.23	102.1	+ .41	+ .7	.0689	105.7	+.0038	+5.8
1902	77	93.9	+8	+8.9	61.37	102.3	+ .27	+ .4	.0735	112.7	+.0008	+1.1
1903	80	97.6			61.64	102.8			.0727	111.5		

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

TOBACCO, PLUG, FINE CUT, AND GRANULATED SMOKING—Continued.

STEMMERS, Male.

[Data for employees from 2 establishments for entire period. Data for hours and wages from 2 establishments, 1890, 1891; 3 establishments, 1892-1894; 4 establishments, 1895-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	83	100.0	+ 6	+ 7.2	60.36	100.0	-4.03	- 6.7	\$0.0542	100.0	+\$0.0198	+36.5
1890	81	97.6	+ 8	+ 9.9	63.73	105.6	-7.40	-11.6	.0397	73.2	+ .0343	+86.4
1891	83	100.0	+ 6	+ 7.2	63.61	105.4	-7.28	-11.4	.0397	73.2	+ .0343	+86.4
1892	79	95.2	+10	+12.7	63.55	105.3	-7.22	-11.4	.0460	84.9	+ .0280	+60.9
1893	80	96.4	+ 9	+11.3	63.22	104.7	-6.89	-10.9	.0460	84.9	+ .0280	+60.9
1894	69	83.1	+20	+29.0	63.57	105.3	-7.24	-11.4	.0470	86.7	+ .0270	+57.4
1895	77	92.8	+12	+15.6	57.46	95.1	-1.07	- 1.9	.0648	119.6	+ .0092	+14.2
1896	82	98.8	+ 7	+ 8.5	57.45	95.2	-1.14	- 2.0	.0645	119.0	+ .0095	+14.7
1897	80	107.2	.....	.....	57.45	95.2	-1.12	- 1.9	.0634	117.0	+ .0106	+16.7
1898	89	107.2	.....	.....	56.85	94.2	- .52	- .9	.0645	119.0	+ .0095	+14.7
1899	103	126.5	-16	-1.2	56.74	94.0	- .41	- .7	.0648	119.6	+ .0092	+14.2
1900	90	108.4	- 1	- 1.1	56.81	94.1	- .48	- .8	.0665	122.7	+ .0075	+11.3
1901	100	120.5	-11	-11.0	56.59	93.8	- .26	- .5	.0700	129.2	+ .0040	+ 5.7
1902	87	104.8	+ 2	+ 2.3	56.91	94.3	- .38	- 1.0	.0678	125.1	+ .0062	+ 9.1
1903	89	107.2	.....	.....	56.33	93.3	.....	.....	.0740	136.5	.....	.....

STEMMERS, Female.

[Data for employees from 5 establishments for entire period. Data for hours and wages from 5 establishments, 1890, 1891; 6 establishments, 1892-1894; 7 establishments, 1895-1900; 8 establishments, 1901-1903.]

Av. 1890-99.	266	100.0	-52	-19.5	55.47	100.0	+0.32	+0.6	\$0.0770	100.0	+\$0.0152	+19.7
1890	280	97.7	-46	-17.7	55.43	99.9	+ .36	+ .6	.0554	71.9	+ .0368	+66.4
1891	233	87.6	-19	- 8.2	55.24	99.6	+ .55	+ 1.0	.0573	74.4	+ .0349	+60.9
1892	267	100.4	-53	-19.9	56.46	101.8	- .67	-1.2	.0852	110.6	+ .0070	+ 8.2
1893	259	97.4	-45	-17.4	56.35	101.6	- .56	-1.0	.0842	109.4	+ .0080	+ 9.5
1894	276	103.8	-62	-22.5	56.35	101.6	- .56	-1.0	.0836	108.6	+ .0086	+10.3
1895	272	102.3	-58	-21.3	55.38	99.8	+ .41	+ .7	.0807	104.8	+ .0115	+14.3
1896	280	105.3	-66	-23.6	55.10	99.3	+ .69	+1.3	.0809	105.1	+ .0113	+14.0
1897	291	109.4	-77	-28.5	54.80	98.8	+ .99	+1.8	.0812	105.5	+ .0110	+13.5
1898	251	94.4	-37	-14.7	54.90	99.0	+ .89	+1.6	.0833	108.2	+ .0089	+10.7
1899	267	100.4	-53	-19.9	54.70	98.6	+1.09	+2.0	.0781	101.4	+ .0141	+18.1
1900	300	112.8	-86	-28.7	54.43	98.1	+1.36	+2.5	.0776	100.6	+ .0146	+18.8
1901	276	103.8	-62	-22.5	56.10	101.1	- .31	- .6	.0775	100.8	+ .0147	+19.0
1902	226	85.0	-12	- 5.3	56.13	101.2	- .34	- .6	.0874	113.5	+ .0048	+ 5.5
1903	214	80.5	.....	.....	55.79	100.6	.....	.....	.0922	119.7	.....	.....

WRAPPERS, Male.

[Data for employees from 3 establishments for entire period. Data for hours and wages from 3 establishments, 1890-1898; 4 establishments, 1899, 1900; 5 establishments, 1901-1903.]

Av. 1890-99.	49	100.0	+1	+2.0	56.40	100.0	+0.32	+0.6	\$0.1518	100.0	+\$0.0885	+ 58.3
1890	50	102.0	.....	.....	57.48	101.9	- .76	-1.3	.1201	79.1	+ .1202	+100.1
1891	50	102.0	.....	.....	56.52	100.2	+ .20	+ .4	.1293	85.2	+ .1110	+ 85.8
1892	47	95.9	+3	+6.4	56.68	100.5	+ .04	+ .1	.1370	90.3	+ .1033	+ 75.4
1893	46	93.9	+4	+8.7	56.74	100.6	- .02	- .04	.1432	94.3	+ .0971	+ 67.8
1894	53	108.2	-3	-5.7	56.38	100.0	+ .34	+ .6	.1471	96.9	+ .0932	+ 63.4
1895	48	98.0	+2	+4.2	56.63	100.4	+ .09	+ .2	.1438	94.7	+ .0965	+ 67.1
1896	46	93.9	+4	+8.7	56.74	100.6	- .02	- .04	.1460	96.2	+ .0943	+ 64.6
1897	50	102.0	.....	.....	56.52	100.2	+ .20	+ .4	.1672	110.1	+ .0731	+ 43.7
1898	51	104.1	-1	-2.0	56.47	100.1	+ .25	+ .4	.1744	114.9	+ .0659	+ 37.8
1899	48	98.0	+2	+4.2	53.79	95.4	+2.93	+5.4	.2101	138.4	+ .0302	+14.4
1900	46	93.9	+4	+8.7	51.69	91.6	+5.03	+9.7	.1754	115.5	+ .0649	+ 37.0
1901	48	98.0	+2	+4.2	55.99	99.3	+ .73	+1.3	.2266	149.3	+ .0137	+ 6.0
1902	50	102.0	.....	.....	56.75	100.6	- .03	- .1	.2318	152.7	+ .0085	+ 3.7
1903	50	102.0	.....	.....	56.72	100.6	.....	.....	.2433	158.3	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716, for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

WOOLEN AND WORSTED GOODS—Continued.

CARDERS, Female.

[Data for employees from 1 establishment for entire period. Data for hours and wages from 4 establishments, 1890, 1901; 2 establishments, 1892, 1895, 1897; 1 establishment, 1893; 3 establishments, 1891, 1894, 1896, 1899, 1900, 1902, 1903; 5 establishments, 1898.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	4	100.0	.....	.....	59.69	100.0	+0.31	+0.5	\$0.0632	100.0	+\$0.0075	+11.9
1890	4	100.0	.....	.....	60.00	100.5	.....	.....	.0658	104.1	+ .0049	+ 7.4
1891	4	100.0	.....	.....	60.00	100.5	.....	.....	.0661	104.6	+ .0046	+ 7.0
1892	4	100.0	.....	.....	60.00	100.5	.....	.....	.0639	101.1	+ .0068	+10.6
1893	4	100.0	.....	.....	60.00	100.5	.....	.....	.0500	79.1	+ .0207	+41.4
1894	4	100.0	.....	.....	57.50	96.3	+2.50	+4.8	.0617	97.6	+ .0090	+14.6
1895	4	100.0	.....	.....	60.00	100.5	.....	.....	.0654	103.5	+ .0053	+ 8.1
1896	4	100.0	.....	.....	59.78	100.2	+ .22	+ .4	.0634	100.3	+ .0073	+11.5
1897	4	100.0	.....	.....	60.00	100.5	.....	.....	.0607	96.0	+ .0100	+16.5
1898	4	100.0	.....	.....	59.64	99.9	+ .36	+ .6	.0683	108.1	+ .0024	+ 3.5
1899	4	100.0	.....	.....	60.00	100.5	.....	.....	.0667	105.5	+ .0040	+ 6.0
1900	4	100.0	.....	.....	60.00	100.5	.....	.....	.0676	107.0	+ .0031	+ 4.6
1901	4	100.0	.....	.....	59.92	100.4	+ .08	+ .1	.0713	112.8	+ .0006	+ .8
1902	4	100.0	.....	.....	60.00	100.5	.....	.....	.0688	108.9	+ .0019	+ 2.8
1903	4	100.0	.....	.....	60.00	100.5	.....	.....	.0707	111.9	.....	.....

CARD STRIPPERS, Male.

[Data from 3 establishments.]

Av. 1890-99.	13	100.0	-4	-30.8	60.00	100.0	.....	.....	\$0.0959	100.0	+\$0.0169	+17.6
1890	12	92.3	-8	-25.0	60.00	100.0	.....	.....	.0886	92.4	+ .0242	+27.3
1891	13	100.0	-4	-30.8	60.00	100.0	.....	.....	.0952	99.3	+ .0176	+18.5
1892	9	69.2	.....	.....	60.00	100.0	.....	.....	.0991	103.3	+ .0137	+13.8
1893	10	76.9	-1	-10.0	60.00	100.0	.....	.....	.0954	99.5	+ .0174	+18.2
1894	12	92.3	-8	-25.0	60.00	100.0	.....	.....	.0949	99.0	+ .0179	+18.9
1895	14	107.7	-6	-35.7	60.00	100.0	.....	.....	.0925	95.5	+ .0203	+21.9
1896	13	100.0	-4	-30.8	60.00	100.0	.....	.....	.0997	104.0	+ .0131	+13.1
1897	15	115.4	-6	-40.0	60.00	100.0	.....	.....	.0961	100.2	+ .0167	+17.4
1898	16	123.1	-7	-43.8	60.00	100.0	.....	.....	.0948	98.9	+ .0180	+19.0
1899	13	100.0	-4	-30.8	60.00	100.0	.....	.....	.1023	106.7	+ .0105	+10.3
1900	14	107.7	-6	-35.7	60.00	100.0	.....	.....	.1068	111.4	+ .0060	+ 5.6
1901	14	107.7	-6	-35.7	60.00	100.0	.....	.....	.1076	112.2	+ .0052	+ 4.8
1902	11	84.6	-2	-18.2	60.00	100.0	.....	.....	.1118	116.6	+ .0010	+ .9
1903	9	69.2	.....	.....	60.00	100.0	.....	.....	.1128	117.6	.....	.....

COMBERS, Male.

[Data from 1 establishment.]

Av. 1890-99.	9	100.0	+13	+144.4	58.60	100.0	-0.60	-1.0	\$0.1306	100.0	+\$0.0028	+2.1
1890	3	33.3	+19	+633.3	60.00	102.4	-2.00	-3.3	.1250	95.7	+ .0084	+6.7
1891	11	122.2	+11	+100.0	60.00	102.4	-2.00	-3.3	.1291	98.9	+ .0043	+3.3
1892	9	100.0	+13	+144.4	60.00	102.4	-2.00	-3.3	.1250	95.7	+ .0084	+6.7
1893	7	77.8	+15	+214.3	58.00	99.0	.....	.....	.1300	99.5	+ .0034	+2.6
1894	7	77.8	+15	+214.3	58.00	99.0	.....	.....	.1400	107.2	+ .0066	+4.7
1895	9	100.0	+13	+144.4	58.00	99.0	.....	.....	.1228	94.0	+ .0106	+8.6
1896	9	100.0	+13	+144.4	58.00	99.0	.....	.....	.1266	104.6	+ .0032	+2.3
1897	14	155.6	+8	+57.1	58.00	99.0	.....	.....	.1246	95.4	+ .0088	+7.1
1898	14	155.6	+8	+57.1	58.00	99.0	.....	.....	.1252	95.9	+ .0082	+6.5
1899	11	122.2	+11	+100.0	58.00	99.0	.....	.....	.1480	113.8	+ .0146	+9.9
1900	13	144.4	+9	+69.2	58.00	99.0	.....	.....	.1392	106.6	+ .0058	+4.2
1901	11	122.2	+11	+100.0	58.00	99.0	.....	.....	.1409	107.9	+ .0075	+5.3
1902	17	188.9	+5	+29.4	58.00	99.0	.....	.....	.1356	103.8	+ .0022	+1.6
1903	22	244.4	.....	.....	58.00	99.0	.....	.....	.1334	102.1	.....	.....

TABLE I.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

WOOLEN AND WORSTED GOODS—Continued.

COMBERS, Female.

[Data from 4 establishments.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average num-ber.	Relative num-ber.	Increase (+) or decrease (-) in 1903 as compared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as compared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	55	100.0	+ 9	+16.4	59.73	100.0	-0.95	-1.6	\$0.0992	100.0	+\$0.0103	+10.4
1890.	42	76.4	+22	+52.4	60.00	100.5	-1.22	-2.0	.0975	98.3	+ .0120	+12.3
1891.	53	96.4	+11	+20.8	60.00	100.5	-1.22	-2.0	.0980	98.8	+ .0115	+11.7
1892.	64	116.4	.....	.....	60.00	100.5	-1.22	-2.0	.0977	98.5	+ .0118	+12.1
1893.	71	129.1	- 7	- 9.9	59.35	99.4	- .57	-1.0	.1005	101.5	+ .0090	+ 9.0
1894.	47	85.6	+17	+36.2	59.70	99.9	- .32	-1.5	.0927	93.4	+ .0168	+18.1
1895.	49	89.1	+15	+30.6	59.71	100.0	- .93	-1.6	.0955	95.3	+ .0140	+14.7
1896.	54	98.2	+10	+18.5	59.70	99.9	- .92	-1.5	.1023	103.1	+ .0072	+ 7.0
1897.	56	101.8	+ 8	+14.3	59.61	99.8	- .83	-1.4	.1021	102.9	+ .0074	+ 7.2
1898.	60	109.1	+ 4	+ 6.7	59.63	99.8	- .85	-1.4	.1032	104.0	+ .0063	+ 6.1
1899.	55	100.0	+ 9	+16.4	59.60	99.8	- .82	-1.4	.1025	103.5	+ .0070	+ 6.8
1900.	60	109.1	+ 4	+ 6.7	59.67	99.9	- .89	-1.5	.1094	110.3	+ .0001	+ .1
1901.	64	116.4	.....	.....	59.59	99.8	- .81	-1.4	.1102	111.1	- .0007	- .6
1902.	61	110.9	+ 3	+ 4.9	58.69	98.3	+ .09	+ .2	.1117	112.6	- .0022	- 2.0
1903.	64	116.4	.....	.....	58.78	98.4	.....	.....	.1095	110.4	.....	.....

DYERS, Male.

[Data from 13 establishments.]

Av. 1890-99.	193	100.0	+13	+ 6.7	60.56	100.0	-0.22	-0.4	\$0.1234	100.0	+\$0.0101	+ 8.2
1890.	181	93.8	+25	+13.8	60.24	99.5	+ .10	+ .2	.1237	100.2	+ .0098	+ 7.9
1891.	175	90.7	+31	+17.0	60.32	99.6	+ .02	+ .03	.1253	101.5	+ .0082	+ 6.5
1892.	207	107.8	- 1	- .5	60.27	99.5	+ .07	+ .1	.1240	100.7	+ .0092	+ 7.4
1893.	193	100.0	+13	+ 6.7	59.60	98.4	+ .74	+1.2	.1272	103.1	+ .0063	+ 5.0
1894.	189	97.9	+17	+ 9.0	61.66	101.8	-1.32	-2.1	.1179	95.5	+ .0156	+13.2
1895.	206	106.7	.....	.....	61.38	101.4	-1.04	-1.7	.1191	96.6	+ .0144	+12.1
1896.	190	98.4	+16	+ 8.4	60.79	100.4	- .45	- .7	.1216	98.5	+ .0117	+ 9.3
1897.	208	107.8	- 2	- 1.0	59.22	97.8	+1.12	+1.9	.1227	99.4	+ .0108	+ 8.4
1898.	191	100.6	+12	+ 6.2	61.01	100.7	- .67	-1.1	.1251	101.4	+ .0094	+ 7.7
1899.	182	94.3	+24	+13.2	61.07	100.8	- .73	-1.2	.1266	102.6	+ .0069	+ 5.5
1900.	185	95.9	+21	+11.4	60.86	100.5	- .52	- .9	.1349	109.3	+ .0014	+ 1.0
1901.	196	101.6	+10	+ 5.1	60.92	100.6	- .58	-1.0	.1318	106.8	+ .0017	+ 1.3
1902.	204	105.7	+ 2	+ 1.0	60.04	99.1	+ .30	+ .5	.1338	108.4	- .0009	- .2
1903.	206	106.7	.....	.....	60.34	99.6	.....	.....	.1335	108.2	.....	.....

LOOM FIXERS, Male.

[Data from 15 establishments.]

Av. 1890-99.	152	100.0	+22	+14.5	59.19	100.0	-0.60	-1.0	\$0.2116	100.0	+\$0.0336	+13.9
1890.	152	100.0	+22	+14.5	59.46	100.5	- .87	-1.5	.2081	98.3	+ .0371	+17.8
1891.	147	96.7	+27	+18.4	59.44	100.4	- .85	-1.4	.2077	98.2	+ .0375	+18.1
1892.	154	101.3	+20	+13.0	59.36	100.3	- .77	-1.3	.2120	100.2	+ .0332	+15.7
1893.	146	96.1	+28	+19.0	59.14	99.9	- .58	- .9	.2158	102.0	+ .0294	+13.6
1894.	137	90.1	+37	+27.0	57.45	97.1	+1.14	+2.0	.2039	96.4	+ .0413	+20.3
1895.	142	93.4	+32	+22.5	59.44	100.4	- .85	-1.4	.2047	96.7	+ .0405	+19.8
1896.	150	98.7	+24	+16.0	59.44	100.4	- .85	-1.4	.2142	101.2	+ .0310	+14.5
1897.	157	103.3	+17	+10.8	59.43	100.4	- .84	-1.4	.2159	102.0	+ .0293	+13.6
1898.	169	111.2	+ 5	+ 3.0	59.33	100.2	- .74	-1.2	.2165	102.0	+ .0294	+13.6
1899.	162	106.6	+12	+ 7.4	59.45	100.4	- .86	-1.4	.2176	102.8	+ .0276	+12.7
1900.	179	117.8	- 5	- 2.8	59.37	100.3	- .78	-1.3	.2281	112.5	+ .0071	+ 3.0
1901.	170	111.8	+ 4	+ 2.4	59.35	100.3	- .76	-1.3	.2374	112.2	+ .0078	+ 3.3
1902.	175	115.1	- 1	- .6	58.63	99.1	- .04	- .1	.2412	114.0	+ .0040	+ 1.7
1903.	174	114.5	.....	.....	58.59	99.0	.....	.....	.2452	115.9	.....	.....

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Continued.

ge 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716. for explanation
crease (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

WOOLEN AND WORSTED GOODS—Continued.

SPINNERS, FRAME, Female.

[Data from 3 establishments.]

r.	Employees.				Hours per week.				Wages per hour.			
	Num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average num- ber.	Relative num- ber.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.		Average.	Relative.	Increase (+) or decrease (-) in 1903 as com- pared with year specified.	
			Num- ber.	Per cent.			Num- ber.	Per cent.			Amount.	Per cent.
0-99.	209	100.0	+154	+ 73.7	59.47	100.0	-1.16	-2.0	\$0.0930	100.0	+\$0.0216	+23.2
.....	154	73.7	+209	+135.7	60.00	100.9	-1.69	-2.8	.0899	96.7	+.0247	+27.5
.....	171	81.8	+192	+112.9	60.00	100.9	-1.69	-2.8	.0908	97.6	+.0238	+26.2
.....	248	118.7	+115	+ 46.4	60.00	100.9	-1.69	-2.8	.0915	98.4	+.0231	+25.2
.....	209	100.0	+154	+ 73.7	59.22	99.6	-.91	-1.5	.0963	103.5	+.0183	+19.0
.....	223	106.7	+140	+ 62.8	59.35	99.8	-1.04	-1.8	.0876	94.2	+.0270	+30.8
.....	221	105.7	+142	+ 64.8	59.37	99.8	-1.06	-1.8	.0884	95.1	+.0262	+29.6
.....	197	94.3	+166	+ 84.3	59.30	99.7	-.99	-1.7	.0940	101.1	+.0205	+21.9
.....	224	107.2	+139	+ 62.1	59.21	99.6	-.90	-1.5	.0953	102.5	+.0193	+20.3
.....	248	118.7	+115	+ 46.4	59.19	99.5	-.88	-1.5	.0971	104.4	+.0175	+18.0
.....	198	94.7	+165	+ 83.3	59.08	99.3	-.77	-1.3	.0990	106.5	+.0156	+15.8
.....	231	110.6	+132	+ 67.1	58.98	99.2	-.67	-1.1	.1097	118.0	+.0049	+ 4.5
.....	249	119.1	+114	+ 45.8	59.10	99.4	-.79	-1.3	.1073	115.4	+.0073	+ 6.8
.....	307	146.9	+ 56	+ 18.2	58.12	97.7	+ .19	+ .3	.1142	122.8	+.0004	+ .4
.....	363	173.7	.....	.....	58.31	98.0	.....	.....	.1146	123.2	.....	.....

SPINNERS, MULE, Male.

or employees from 9 establishments for entire period. Data for hours and wages from 9 estab-
lishments, 1890-1892; 10 establishments, 1893-1896; 11 establishments, 1897-1903.]

0-99.	146	100.0	+73	+50.0	58.87	100.0	+0.22	+ 0.4	\$0.1301	100.0	+\$0.0328	+24.8
.....	145	99.3	+74	+51.0	60.46	102.7	-1.37	- 2.3	.1257	96.6	+.0367	+29.2
.....	153	104.8	+66	+43.1	60.47	102.7	-1.38	- 2.3	.1243	95.5	+.0381	+30.7
.....	143	97.9	+76	+53.1	60.38	102.6	-1.29	- 2.1	.1222	93.9	+.0402	+32.9
.....	132	90.4	+87	+63.9	58.42	99.2	+ .67	+ 1.1	.1321	101.5	+.0303	+22.9
.....	124	84.9	+95	+76.6	55.20	90.4	+5.89	+11.1	.1276	98.1	+.0346	+27.3
.....	154	105.6	+65	+42.2	59.84	101.6	-.75	- 1.3	.1252	96.2	+.0372	+29.7
.....	150	102.7	+69	+46.0	59.79	101.6	-.70	- 1.2	.1349	103.7	+.0275	+20.4
.....	149	102.1	+70	+47.0	55.67	94.6	+3.42	+ 6.1	.1356	104.2	+.0268	+19.8
.....	161	110.3	+58	+36.0	59.83	101.6	-.74	- 1.3	.1446	111.1	+.0178	+12.3
.....	118	101.4	+71	+48.0	60.59	102.9	-1.50	- 2.5	.1288	99.0	+.0336	+26.1
.....	157	107.5	+62	+39.5	59.94	101.8	-.85	- 1.4	.1504	115.6	+.0120	+ 8.0
.....	154	105.5	+65	+42.2	59.88	101.7	-.79	- 1.3	.1487	114.3	+.0137	+ 9.2
.....	208	189.0	+16	+ 7.9	59.42	100.9	-.33	- .6	.1483	114.0	+.0141	+ 9.5
.....	219	150.0	.....	.....	59.09	100.4	.....	.....	.1624	124.8	.....	.....

SPINNERS, MULE, Female.

or employees from 2 establishments for entire period. Data for hours and wages from 3 estab-
lishments, 1890-1892, 1894-1896, 1901-1903; 2 establishments, 1893, 1897-1900.]

0-99.	35	100.0	- 8	-22.9	60.00	100.0	.....	.....	\$0.0556	100.0	+\$0.0077	+13.8
.....	45	128.6	-18	-40.0	60.00	100.0	.....	.....	.0551	99.1	+.0082	+14.9
.....	46	131.4	-19	-41.3	60.00	100.0	.....	.....	.0555	99.8	+.0078	+14.1
.....	44	125.7	-17	-38.6	60.00	100.0	.....	.....	.0554	99.6	+.0079	+14.3
.....	28	80.0	- 1	- 3.6	60.00	100.0	.....	.....	.0613	110.3	+.0020	+ 3.3
.....	30	85.7	- 3	-10.0	60.00	100.0	.....	.....	.0541	97.3	+.0092	+17.0
.....	38	108.6	-11	-28.9	60.00	100.0	.....	.....	.0545	98.0	+.0088	+16.1
.....	29	82.9	- 2	- 6.9	60.00	100.0	.....	.....	.0543	97.7	+.0090	+16.6
.....	29	82.9	- 2	- 6.9	60.00	100.0	.....	.....	.0552	99.3	+.0081	+14.7
.....	26	74.3	+ 1	+ 3.8	60.00	100.0	.....	.....	.0550	98.9	+.0083	+15.1
.....	30	85.7	- 3	-10.0	60.00	100.0	.....	.....	.0553	99.5	+.0080	+14.5
.....	23	65.7	+ 4	+17.4	60.00	100.0	.....	.....	.0561	100.9	+.0072	+12.8
.....	18	51.4	+ 9	+50.0	60.00	100.0	.....	.....	.0582	104.7	+.0051	+ 8.8
.....	21	60.0	+ 6	+28.6	60.00	100.0	.....	.....	.0675	121.4	+.0042	- 6.2
.....	27	77.1	.....	.....	60.00	100.0	.....	.....	.0633	113.8	.....	.....

TABLE II.—WAGES AND HOURS OF LABOR, 1890-1903—Concluded.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71A.]

WOOLEN AND WORSTED GOODS—Concluded.

WEAVERS, Male.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 10 establishments, 1890-1900; 11 establishments, 1901-1903.]

Year.	Employees.				Hours per week.				Wages per hour.			
	Num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age num-ber.	Rela-tive num-ber.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.		Aver-age.	Rela-tive.	Increase (+) or decrease (-) in 1903 as com-pared with year specified.	
			Num-ber.	Per cent.			Num-ber.	Per cent.			Amount.	Per cent.
Av. 1890-99.	661	100.0	+473	+ 71.6	59.62	100.0	-0.97	-1.6	\$0.1481	100.0	+\$0.0968	+24.9
1890	609	92.1	+525	+ 86.2	60.00	100.6	-1.35	-2.3	.1505	101.6	+.0344	+22.9
1891	652	98.6	+482	+ 73.9	60.00	100.6	-1.35	-2.3	.1515	102.3	+.0334	+22.0
1892	687	103.9	+447	+ 65.1	60.00	100.6	-1.35	-2.3	.1538	103.8	+.0311	+20.2
1893	619	93.6	+515	+ 83.2	59.34	99.5	-.69	-1.2	.1624	109.7	+.0225	+13.9
1894	535	80.9	+599	+112.0	59.42	99.7	-.77	-1.3	.1375	92.8	+.0474	+24.5
1895	639	96.7	+493	+ 77.5	59.47	99.7	-.82	-1.4	.1406	94.9	+.0432	+21.5
1896	681	103.0	+453	+ 66.5	59.49	99.8	-.84	-1.4	.1403	94.7	+.0446	+21.8
1897	751	113.6	+383	+ 51.0	59.45	99.7	-.80	-1.3	.1451	98.0	+.0396	+27.4
1898	765	115.7	+369	+ 48.2	59.50	99.8	-.85	-1.4	.1498	101.1	+.0351	+23.4
1899	668	101.1	+466	+ 69.8	59.53	99.8	-.88	-1.5	.1495	100.9	+.0354	+23.7
1900	915	138.4	+219	+ 23.9	59.38	99.6	-.73	-1.2	.1655	111.7	+.0194	+11.7
1901	944	142.8	+190	+ 20.1	59.38	99.6	-.73	-1.2	.1683	113.6	+.0166	+ 9.9
1902	920	139.2	+214	+ 23.3	58.84	98.7	-.19	-.3	.1783	120.4	+.0066	+ 3.7
1903	1,134	171.6	.....	.....	58.66	98.4	.....	.....	.1849	124.8	.....	.....

WEAVERS, Female.

[Data for employees from 9 establishments for entire period. Data for hours and wages from 10 establishments, 1890-1895, 1901-1903; 9 establishments, 1896-1900.]

Av. 1890-99.	1,272	100.0	+103	+ 8.1	59.40	100.0	-1.08	-1.8	\$0.1349	100.0	+\$0.0216	+16.0
1890	1,354	106.4	+ 21	+ 1.6	60.00	101.0	-1.68	-2.8	.1355	100.4	+.0210	+15.5
1891	1,432	112.6	- 57	- 4.0	60.00	101.0	-1.68	-2.8	.1338	98.4	+.0227	+17.0
1892	1,222	96.1	+153	+12.5	60.00	101.0	-1.68	-2.8	.1360	100.8	+.0205	+15.1
1893	1,362	107.1	+ 13	+ 1.0	59.12	99.5	-.80	-1.4	.1441	106.8	+.0124	+ 8.6
1894	1,278	100.5	+ 97	+ 7.6	59.18	99.6	-.86	-1.5	.1272	94.3	+.0260	+23.0
1895	1,182	92.9	+193	+16.3	59.19	99.6	-.87	-1.5	.1265	93.8	+.0300	+23.7
1896	1,189	93.5	+186	+15.6	59.21	99.7	-.89	-1.5	.1305	96.7	+.0260	+19.9
1897	1,176	92.5	+199	+16.9	59.20	99.7	-.88	-1.5	.1359	100.7	+.0206	+15.2
1898	1,338	105.2	+ 37	+ 2.8	59.06	99.4	-.74	-1.3	.1411	104.6	+.0154	+10.9
1899	1,187	93.3	+188	+15.8	59.02	99.4	-.70	-1.2	.1383	102.5	+.0182	+12.2
1900	1,336	105.0	+ 39	+ 2.9	59.07	99.4	-.75	-1.3	.1481	109.8	+.0054	+ 3.7
1901	1,361	107.0	+ 14	+ 1.0	59.02	99.4	-.70	-1.2	.1517	112.5	+.0048	+ 3.3
1902	1,853	106.4	+ 22	+ 1.6	58.32	98.2	.....	.....	.1517	112.5	.....	.....
1903	1,875	108.1	.....	.....	58.32	98.2	.....	.....	.1566	116.0	.....	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

AGRICULTURAL IMPLEMENTS.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	86.2	+44.8	100.3	-0.9	97.1	+20.7
1891	88.2	+41.5	100.3	- .9	100.8	+16.3
1892	95.1	+31.2	100.3	- .9	101.6	+15.4
1893	105.1	+18.7	100.3	- .9	102.5	+14.3
1894	95.8	+30.3	99.2	+ .2	97.3	+20.5
1895	98.1	+27.2	100.3	- .9	96.4	+21.6
1896	94.5	+32.1	99.9	- .5	102.0	+14.9
1897	95.3	+31.0	99.0	+ .4	99.4	+17.9
1898	120.9	+ 3.2	100.2	- .8	101.0	+16.0
1899	120.6	+ 3.5	100.2	- .8	101.8	+15.1
1900	130.7	- 4.5	100.2	- .8	105.8	+10.8
1901	105.9	+17.8	100.2	- .8	107.6	+ 8.9
1902	115.8	+ 7.8	100.2	- .8	112.8	+ 3.9
1903	124.8	.....	99.4	.....	117.2	.....

BAKERY, BREAD.

1890	93.4	+43.2	100.8	-6.8	99.2	+19.8
1891	94.7	+41.3	100.7	-6.8	99.7	+19.2
1892	96.1	+39.2	100.9	-6.9	100.2	+18.6
1893	96.1	+39.2	100.5	-6.6	100.6	+18.1
1894	97.3	+37.5	100.4	-6.5	98.3	+20.9
1895	100.3	+33.4	99.8	-5.9	98.6	+20.5
1896	102.2	+30.9	99.5	-5.6	99.5	+19.4
1897	102.7	+30.3	100.2	-6.3	99.7	+19.2
1898	107.3	+24.7	99.7	-5.6	101.2	+17.4
1899	109.9	+21.7	97.7	-3.9	103.0	+15.3
1900	114.0	+17.4	96.8	-3.0	106.5	+11.5
1901	121.1	+10.5	96.2	-2.4	108.7	+ 9.3
1902	130.5	+ 2.5	95.8	-2.0	113.8	+ 4.4
1903	133.8	.....	93.9	.....	118.8	.....

BLACKSMITHING AND HORSESHOEING.

1890	101.8	+0.1	101.1	-4.6	98.9	+13.4
1891	100.9	+1.0	101.1	-4.6	98.7	+13.7
1892	102.5	- .6	101.0	-4.6	98.8	+13.6
1893	101.1	+ .8	100.2	-3.8	99.2	+13.1
1894	98.7	+3.2	99.7	-3.3	99.1	+13.2
1895	96.6	+5.5	99.6	-3.2	99.1	+13.2
1896	98.7	+3.2	99.5	-3.1	99.9	+12.3
1897	97.9	+4.1	99.4	-3.0	100.9	+11.2
1898	101.1	+ .8	99.3	-2.9	102.2	+ 9.8
1899	101.3	+ .6	99.0	-2.6	102.9	+ 9.0
1900	102.4	- .5	98.4	-2.0	104.5	+ 7.4
1901	105.1	-3.0	97.7	-1.3	106.6	+ 5.3
1902	101.5	+ .4	97.0	- .6	108.6	+ 3.3
1903	101.9	.....	96.4	.....	112.2	.....

BOOTS AND SHOES.

1890	77.2	+68.9	100.2	-3.6	97.9	+18.1
1891	80.0	+63.0	100.8	-4.2	96.2	+20.2
1892	86.4	+50.9	100.5	-3.9	98.2	+17.7
1893	97.1	+34.3	100.1	-3.5	100.5	+15.0
1894	99.0	+31.7	99.9	-3.3	99.6	+16.2
1895	103.2	+26.4	99.9	-3.3	100.6	+14.9
1896	110.5	+18.0	99.8	-3.2	100.7	+14.8
1897	111.3	+17.2	99.7	-3.1	102.5	+12.8
1898	111.3	+17.2	99.6	-3.0	101.8	+13.6
1899	118.4	+10.1	99.5	-2.9	102.3	+13.0
1900	123.2	+ 5.8	99.0	-2.4	105.3	+ 9.8
1901	127.7	+ 2.1	99.2	-2.6	106.2	+ 9.9
1902	124.0	+ 5.2	98.0	-1.4	108.8	+ 6.3
1903	130.4	.....	96.6	.....	115.6	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71A.]

BOOTS AND SHOES, RUBBER.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	88.4	+42.8	100.0	.....	100.3	+6.1
1891.....	90.7	+39.1	100.0	.....	100.4	-6.0
1892.....	99.9	+26.3	100.0	.....	103.2	+2.1
1893.....	101.7	+24.1	100.0	.....	97.7	-8.9
1894.....	101.8	+24.0	100.0	.....	98.8	+7.7
1895.....	101.8	+24.0	100.0	.....	101.4	+4.9
1896.....	87.6	+44.1	100.0	.....	94.0	+13.2
1897.....	105.1	+20.1	100.0	.....	102.8	+3.5
1898.....	111.9	+12.8	100.0	.....	101.8	+4.5
1899.....	113.9	+10.8	100.0	.....	99.8	-6.6
1900.....	112.6	+12.1	100.0	.....	97.4	+3.2
1901.....	115.7	+9.1	100.0	.....	100.6	-3.8
1902.....	120.0	+5.2	100.0	.....	104.7	+1.6
1903.....	126.2	.....	103.0	.....	106.4	.....

BOXES, PAPER.

1890.....	79.1	+43.2	100.1	-1.1	99.6	+9.7
1891.....	82.0	+38.2	100.1	-1.1	100.6	+7.7
1892.....	83.0	+36.5	100.0	-1.0	102.9	+5.2
1893.....	88.4	+28.2	100.0	-1.0	100.2	+6.1
1894.....	97.9	+15.7	100.0	-1.0	99.0	+9.4
1895.....	89.0	+27.3	100.0	-1.0	100.4	+7.9
1896.....	99.3	+14.1	100.0	-1.0	98.8	+9.6
1897.....	100.4	+12.8	100.0	-1.0	98.0	+10.5
1898.....	97.1	+16.7	100.0	-1.0	98.6	+9.9
1899.....	100.7	+12.5	99.9	-9	102.1	+6.1
1900.....	95.4	+18.8	100.0	-1.0	103.3	+4.8
1901.....	101.3	+11.8	100.0	-1.0	104.3	+2.8
1902.....	111.6	+1.5	100.0	-1.0	106.5	+1.7
1903.....	113.3	.....	99.0	.....	108.3	.....

BRICK.

1890.....	98.6	+11.5	99.9	-0.6	101.0	+11.1
1891.....	97.6	+12.6	99.9	-6	101.3	+10.8
1892.....	99.7	+10.2	100.0	-7	102.7	+9.3
1893.....	100.2	+9.7	100.0	-7	101.8	+10.2
1894.....	98.7	+11.3	100.1	-8	99.1	+13.2
1895.....	97.9	+12.3	100.0	-7	98.5	+13.9
1896.....	100.4	+9.5	100.0	-7	97.1	+13.6
1897.....	100.9	+8.9	99.9	-6	97.4	+15.2
1898.....	101.5	+8.3	100.1	-8	100.1	+12.1
1899.....	104.1	+5.6	100.2	-9	101.1	+11.0
1900.....	102.7	+7.0	99.9	-6	103.1	+8.8
1901.....	104.6	+5.1	100.0	-7	105.1	+6.8
1902.....	108.5	+1.3	99.9	-6	110.1	+1.9
1903.....	109.9	.....	99.3	.....	112.2	.....

BUILDING TRADES.

1890.....	96.5	+27.7	102.5	-10.4	96.6	+20.4
1891.....	100.0	+23.2	101.8	-9.8	97.9	+23.1
1892.....	106.8	+15.4	100.7	-8.8	99.9	+25.3
1893.....	101.7	+21.1	100.5	-8.7	100.1	+25.3
1894.....	90.2	+36.6	100.7	-8.8	97.7	+29.4
1895.....	92.4	+33.3	100.3	-8.5	98.4	+25.5
1896.....	99.2	+24.2	99.2	-7.5	99.9	+25.3
1897.....	99.7	+23.6	98.6	-6.9	101.3	+24.6
1898.....	104.1	+18.3	98.1	-6.4	102.8	+20.0
1899.....	109.8	+12.2	97.5	-5.8	105.4	+18.9
1900.....	113.6	+8.5	96.5	-3.9	110.0	+14.9
1901.....	119.8	+2.8	94.4	-2.8	114.4	+10.5
1902.....	126.2	-2.4	92.6	-9	121.2	+4.8
1903.....	123.2	.....	91.8	.....	128.4	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (—) in 1903, as compared with previous years, see note on page 718.]

BUTTER AND CHEESE.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (—) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (—) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (—) in 1903 as compared with year specified.
1890	94.0	+12.2	100.3	—0.1	100.0	+6.3
1891	96.0	+ 9.9	100.1	+ .1	99.5	+6.8
1892	99.0	+ 6.6	100.1	+ .1	98.8	+7.6
1893	99.0	+ 6.6	100.1	+ .1	98.9	+7.5
1894	100.0	+ 5.5	100.1	+ .1	98.1	+8.4
1895	101.1	+ 4.4	99.9	+ .3	98.7	+7.7
1896	101.6	+ 3.8	100.0	+ .2	100.5	+5.8
1897	102.1	+ 3.3	100.1	+ .1	99.9	+6.4
1898	102.5	+ 2.9	99.8	+ .4	102.2	+4.0
1899	103.0	+ 2.4	99.8	+ .4	103.5	+2.7
1900	103.0	+ 2.4	99.2	+1.0	104.9	+1.3
1901	105.5	.....	99.8	+ .4	105.0	+1.2
1902	106.0	— .5	100.3	— .1	105.7	+ .6
1903	105.5	.....	100.2	.....	106.3	.....

CANDY.

1890	112.7	— 8.5	99.3	+0.9	102.3	+ 6.8
1891	108.9	— 5.3	99.3	+ .9	103.3	+ 5.8
1892	103.2	— .1	100.0	+ .2	99.8	+ 9.5
1893	104.2	— 1.1	100.0	+ .2	98.2	+11.3
1894	95.7	+ 7.7	99.9	+ .3	98.8	+10.6
1895	95.8	+ 7.6	100.3	— .1	98.9	+10.6
1896	94.8	+ 8.8	100.3	— .1	100.0	+ 9.3
1897	99.2	+ 3.9	100.3	— .1	98.1	+11.4
1898	89.6	+15.1	100.4	— .2	100.5	+ 8.8
1899	92.9	+11.0	100.4	— .2	100.7	+ 8.5
1900	96.6	+ 6.7	100.4	— .2	99.0	+10.4
1901	91.2	+13.0	100.3	— .1	109.5	— .2
1902	91.9	+12.2	100.3	— .1	108.5	+ .7
1903	103.1	.....	100.2	.....	109.3	.....

CARPETS.

1890	104.2	+17.6	101.2	—1.9	99.6	+11.7
1891	100.5	+21.9	101.2	—1.9	97.9	+13.7
1892	100.6	+21.8	100.4	—1.1	100.0	+11.3
1893	105.5	+16.1	99.5	— .2	99.8	+11.5
1894	87.0	+40.8	99.6	— .3	95.3	+16.8
1895	101.8	+20.3	99.5	— .2	97.2	+14.5
1896	102.6	+19.4	99.5	— .2	101.9	+ 9.2
1897	93.1	+31.6	99.6	— .3	101.8	+ 9.3
1898	96.9	+26.4	99.6	— .3	103.0	+ 8.1
1899	106.4	+15.1	99.6	— .3	103.7	+ 7.3
1900	111.5	+ 9.9	99.7	— .4	104.1	+ 6.9
1901	115.2	+ 6.3	99.6	— .3	108.1	+ 3.0
1902	119.4	+ 2.6	99.6	— .3	105.4	+ 5.6
1903	122.5	.....	99.3	.....	111.3	.....

CARRIAGES AND WAGONS.

1890	95.5	+21.7	100.4	—2.0	100.0	+7.6
1891	98.6	+17.8	100.6	—2.2	99.4	+8.2
1892	102.9	+12.9	100.4	—2.0	100.4	+7.2
1893	103.4	+12.4	100.1	—1.7	99.6	+8.0
1894	95.7	+21.4	99.5	—1.1	99.2	+8.5
1895	97.2	+19.5	100.0	—1.6	98.1	+9.7
1896	92.8	+25.2	99.7	—1.3	100.7	+6.9
1897	97.8	+18.8	99.8	—1.4	100.2	+7.4
1898	104.6	+11.1	100.3	—1.9	100.1	+7.5
1899	111.0	+ 4.7	99.2	— .8	102.3	+5.2
1900	112.7	+ 3.1	99.2	— .8	102.2	+5.3
1901	121.4	— 4.3	99.5	—1.1	101.6	+5.9
1902	115.2	+ .9	99.7	—1.3	103.4	.....
1903	116.2	.....	98.4	.....	107.6	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 71b.]

FOUNDRY AND MACHINE SHOP.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	101.8	+46.4	100.5	-5.1	99.2	+13.1
1891.....	101.1	+47.4	100.4	-5.0	100.3	+11.9
1892.....	94.5	+57.7	100.2	-4.8	102.7	+ 9.3
1893.....	99.6	+49.6	100.0	-4.6	101.6	+10.4
1894.....	87.7	+69.9	99.9	-4.5	98.7	+12.7
1895.....	93.2	+59.9	100.1	-4.7	99.2	+13.1
1896.....	93.9	+58.7	99.8	-4.4	100.5	+11.6
1897.....	93.5	+59.4	99.7	-4.3	99.8	+12.4
1898.....	108.1	+37.8	99.9	-4.5	99.0	+13.3
1899.....	125.1	+19.1	99.4	-4.0	99.1	+12.2
1900.....	126.8	+17.5	99.2	-3.8	101.5	+10.5
1901.....	132.0	+12.9	98.1	-2.8	104.7	+ 7.2
1902.....	139.2	+ 7.0	96.6	-1.2	108.2	+ 3.7
1903.....	149.0	.....	95.4	.....	112.2	.....

FRUITS AND VEGETABLES, CANNING AND PRESERVING.

1890.....	108.5	- 3.4	99.9	+0.1	100.7	+ 3.3
1891.....	111.5	- 6.0	100.4	- 4	101.4	+ 4.5
1892.....	111.5	- 6.0	100.4	- 4	101.4	+ 4.5
1893.....	111.5	- 6.0	100.4	- 4	101.4	+ 4.5
1894.....	100.2	+ 4.6	99.9	+ 1	100.7	+ 6.3
1895.....	96.5	+ 8.6	100.0	.....	100.8	+ 5.2
1896.....	89.2	+17.5	99.8	+ 2	100.9	+ 8.1
1897.....	89.2	+17.5	99.8	+ 2	98.0	+10.4
1898.....	88.5	+18.4	99.7	+ 3	95.8	+10.6
1899.....	92.9	+12.8	99.7	+ 3	100.8	+ 5.2
1900.....	101.3	+ 3.5	99.7	+ 3	100.8	+ 5.2
1901.....	97.6	+ 7.4	99.8	+ 2	105.4	+ 6
1902.....	104.8	.....	100.0	.....	105.3	+ 7
1903.....	104.8	.....	100.0	.....	106.0	.....

FURNITURE.

1890.....	93.7	+25.1	101.2	-4.0	99.4	+18.9
1891.....	95.3	+23.0	100.4	-3.2	102.0	+15.9
1892.....	101.4	+15.5	99.5	-2.3	102.6	+16.2
1893.....	98.5	+19.0	100.2	-3.0	100.5	+17.6
1894.....	95.2	+23.1	98.3	-1.1	99.2	+19.2
1895.....	96.1	+22.0	100.0	-2.8	97.1	+21.7
1896.....	99.0	+18.4	100.4	-3.2	97.7	+21.0
1897.....	102.8	+14.0	99.9	-2.7	100.2	+19.0
1898.....	104.5	+12.2	100.2	-3.0	98.6	+19.9
1899.....	113.4	+ 8.4	100.0	-2.8	102.9	+14.9
1900.....	110.0	+ 6.5	99.7	-2.5	103.2	+14.5
1901.....	113.5	+ 8.3	98.4	-1.2	110.3	+ 7.2
1902.....	119.8	- 2.2	97.3	- 1	116.8	+ 1.2
1903.....	117.2	.....	97.2	.....	118.2	.....

GAS.

1890.....	110.1	+ 8.4	100.6	-4.3	99.5	+1.4
1891.....	95.4	+25.2	100.7	-4.4	99.0	+2.3
1892.....	91.3	+30.8	101.0	-4.7	99.6	+1.7
1893.....	84.1	+42.0	101.0	-4.7	100.4	+ 9
1894.....	100.5	+18.8	101.0	-4.7	101.2	+ 1
1895.....	95.6	+24.9	100.7	-4.1	99.7	+1.6
1896.....	98.2	+28.1	100.9	-4.6	101.0	+ 3
1897.....	111.0	+ 7.6	100.8	-4.5	100.7	+ 6
1898.....	129.8	- 8.0	97.3	-1.0	98.6	+2.7
1899.....	91.6	+30.3	96.3	.....	100.3	+1.0
1900.....	104.0	+14.8	94.8	+1.6	101.3	.....
1901.....	99.0	+20.6	97.4	-1.1	98.5	+4.0
1902.....	121.1	- 1.4	95.3	+1.0	104.9	-3.4
1903.....	119.4	.....	95.3	.....	101.8	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

GLASS.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	99.4	+17.4	100.1	-0.4	101.5	+18.2
1891	108.2	+ 7.9	99.9	-.2	100.2	+19.8
1892	101.6	+14.9	100.0	-.3	101.3	+18.5
1893	97.6	+19.6	100.1	-.4	100.2	+19.8
1894	93.1	+25.3	99.8	-.1	99.1	+21.1
1895	92.8	+25.8	99.9	-.2	92.6	+29.6
1896	95.7	+21.9	100.0	-.3	96.6	+24.2
1897	95.9	+21.7	100.3	-.6	98.3	+22.1
1898	104.9	+11.2	100.0	-.3	101.2	+18.6
1899	108.7	+ 7.4	99.9	-.2	103.5	+15.9
1900	110.3	+ 5.8	100.3	-.6	107.7	+11.4
1901	112.6	+ 3.6	100.0	-.3	107.5	+11.6
1902	115.0	+ 1.5	99.9	-.2	115.0	+ 4.3
1903	116.7	.....	99.7	.....	120.0	.....

HARNESS.

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	91.0	+52.5	100.4	-2.4	100.2	+15.6
1891	91.8	+51.2	100.4	-2.4	100.6	+15.1
1892	94.1	+47.5	100.2	-2.2	100.6	+15.1
1893	94.2	+47.3	100.1	-2.1	101.0	+14.7
1894	94.5	+46.9	100.0	-2.0	99.0	+17.0
1895	99.3	+39.8	99.8	-1.8	98.5	+17.6
1896	104.3	+33.1	99.7	-1.7	98.7	+17.3
1897	106.9	+31.1	99.8	-1.8	99.5	+16.4
1898	110.2	+26.0	99.9	-1.9	100.7	+15.0
1899	117.6	+18.0	99.7	-1.7	101.2	+14.4
1900	124.5	+11.5	99.8	-1.8	102.0	+13.5
1901	128.5	+ 8.0	99.5	-1.5	105.6	+ 9.7
1902	135.7	+ 2.3	99.0	-1.0	108.7	+ 6.5
1903	138.8	.....	98.0	.....	115.8	.....

HATS, FUR.

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	86.2	+95.6	100.7	-7.9	104.4	+ 9.0
1891	94.0	+79.4	100.5	-7.8	100.5	+13.2
1892	90.9	+85.5	100.5	-7.8	100.0	+13.8
1893	100.0	+68.6	100.2	-7.5	97.5	+16.7
1894	103.2	+63.4	100.2	-7.5	99.6	+14.3
1895	90.1	+87.1	100.1	-7.4	97.8	+16.4
1896	94.5	+78.4	100.2	-7.5	98.8	+15.2
1897	101.0	+66.9	100.0	-7.3	100.6	+13.1
1898	109.5	+54.0	99.4	-6.7	99.8	+14.0
1899	132.1	+27.6	98.3	-5.7	100.9	+12.8
1900	147.0	+14.7	98.5	-5.9	102.4	+11.1
1901	160.9	+ 4.8	98.7	-6.1	103.0	+10.5
1902	164.6	+ 2.4	94.2	-1.6	110.3	+ 3.2
1903	168.6	.....	92.7	.....	113.8	.....

HOSIERY AND KNIT GOODS.

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	81.3	+54.5	101.5	-3.1	106.1	+ 8.9
1891	89.3	+40.6	101.5	-3.1	107.3	+ 7.6
1892	122.6	+ 2.4	101.5	-3.1	99.0	+16.7
1893	116.4	+ 7.9	100.3	-1.9	102.5	+12.7
1894	83.7	+50.1	95.0	+3.6	97.7	+18.2
1895	99.8	+25.9	100.2	-1.8	102.9	+12.2
1896	93.1	+34.9	100.0	-1.6	99.8	+15.7
1897	93.1	+34.9	100.1	-1.7	94.7	+22.0
1898	111.3	+12.8	100.0	-1.6	95.5	+20.9
1899	107.9	+16.4	100.0	-1.6	94.7	+22.0
1900	120.8	+ 4.0	98.9	-.5	98.0	+17.9
1901	131.8	- 4.7	98.7	-.3	102.4	+12.8
1902	121.2	+ 8.6	98.9	-.5	108.7	+ 6.3
1903	125.6	.....	98.4	.....	115.5	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

LIQUORS, DISTILLED.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	93.5	+16.2	100.1	-3.0	98.8	+10.4
1891.....	99.0	+15.7	100.1	-3.0	98.8	+10.4
1892.....	98.4	+16.4	100.1	-3.0	98.8	+10.4
1893.....	97.6	+17.3	100.1	-3.0	99.2	+10.0
1894.....	99.4	+15.2	100.2	-3.1	99.8	+9.3
1895.....	98.7	+16.0	100.1	-3.0	99.3	+9.9
1896.....	97.6	+17.3	100.1	-3.0	100.5	+8.6
1897.....	102.3	+11.9	99.9	-2.8	100.4	+8.7
1898.....	99.1	+15.5	99.7	-2.6	103.4	+5.5
1899.....	100.9	+13.5	99.7	-2.6	100.9	+8.1
1900.....	97.2	+17.8	100.1	-3.0	100.5	+8.6
1901.....	122.3	-6.4	98.7	-1.6	105.1	+3.8
1902.....	118.0	+1.3	98.0	-9	108.0	+1.9
1903.....	114.5	.....	97.1	.....	109.1	.....

LIQUORS, MALT.

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	92.8	+35.9	100.8	-10.8	97.7	+23.1
1891.....	92.9	+35.7	100.3	-10.4	98.8	+21.6
1892.....	94.9	+32.9	100.5	-10.5	98.3	+22.4
1893.....	103.2	+22.2	100.5	-10.5	98.8	+21.8
1894.....	104.5	+20.7	100.5	-10.5	99.5	+20.9
1895.....	102.0	+23.6	100.4	-10.5	100.2	+20.1
1896.....	101.2	+24.6	99.8	-9.9	100.5	+19.7
1897.....	103.1	+22.3	99.9	-10.0	101.1	+19.0
1898.....	101.1	+24.7	98.7	-8.9	102.5	+17.4
1899.....	104.5	+20.7	98.8	-9.0	102.7	+17.1
1900.....	104.4	+20.8	96.4	-6.7	108.0	+11.4
1901.....	115.4	+9.3	94.2	-4.6	111.2	+8.2
1902.....	118.1	+6.8	91.0	-1.2	117.5	+2.4
1903.....	126.1	.....	89.9	.....	120.3	.....

LITHOGRAPHING

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	98.3	+27.2	99.8	-0.9	97.7	+9.4
1891.....	96.3	+29.8	99.9	-1.0	100.6	+6.7
1892.....	103.5	+20.8	99.7	-8	98.3	+9.2
1893.....	100.1	+24.9	99.9	-1.0	99.5	+7.8
1894.....	96.9	+29.0	100.0	-1.1	98.2	+9.5
1895.....	96.5	+29.5	100.1	-1.2	98.9	+8.8
1896.....	91.4	+36.8	100.3	-1.4	98.3	+9.2
1897.....	102.7	+21.7	100.1	-1.2	101.0	+6.2
1898.....	101.6	+23.0	100.1	-1.2	103.0	+4.2
1899.....	112.4	+11.2	100.0	-1.1	104.5	+2.7
1900.....	116.2	+7.6	100.1	-1.2	104.2	+3.0
1901.....	123.2	+1.5	100.1	-1.2	101.9	+2.3
1902.....	122.0	+2.5	99.5	-6	103.7	+1.5
1903.....	125.0	.....	98.9	.....	107.3	.....

LUMBER.

Year.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	91.2	+32.6	100.4	-2.1	102.8	+10.2
1891.....	95.7	+30.5	100.2	-1.9	102.1	+10.6
1892.....	96.1	+30.0	100.2	-1.9	102.1	+11.0
1893.....	95.6	+30.6	99.7	-1.4	101.7	+11.4
1894.....	95.3	+31.1	99.7	-1.4	97.8	+15.9
1895.....	96.3	+29.7	100.1	-1.8	97.2	+16.6
1896.....	99.1	+26.0	100.1	-1.8	97.0	+16.3
1897.....	105.0	+19.0	99.9	-1.6	97.4	+16.3
1898.....	107.6	+16.1	99.8	-1.5	98.4	+14.0
1899.....	111.3	+12.2	99.8	-1.5	102.2	+8.9
1900.....	115.5	+8.1	99.5	-1.2	104.4	+5.3
1901.....	118.7	+5.2	99.1	-8	106.5	+6.4
1902.....	122.6	+1.1	98.4	-1	108.5	+2.5
1903.....	124.9	.....	98.3	.....	112.3	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

MARBLE AND STONE WORK.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	103.8	+ 8.2	101.8	-7.7	26.5	+20.4
1891.....	102.5	+ 9.6	100.9	-6.8	99.5	+19.2
1892.....	103.4	+ 8.6	100.4	-6.4	100.3	+18.2
1893.....	102.0	+10.1	100.5	-6.5	99.7	+19.0
1894.....	96.3	+16.6	100.6	-6.6	98.0	+21.0
1895.....	96.4	+16.5	100.6	-6.6	97.0	+22.3
1896.....	94.9	+18.3	99.6	-5.6	101.0	+17.4
1897.....	95.7	+17.3	99.2	-5.2	101.6	+16.7
1898.....	98.6	+13.9	99.3	-5.3	101.2	+17.2
1899.....	106.3	+ 5.6	97.2	-8.3	103.2	+14.9
1900.....	107.0	+ 5.0	96.9	-8.0	104.9	+13.1
1901.....	115.9	- 3.1	96.1	-2.2	109.0	+ 8.8
1902.....	116.0	- 3.2	95.5	-1.6	113.5	+ 4.6
1903.....	112.3	.....	94.0	.....	118.6	.....

MUSICAL INSTRUMENTS, ORGANS.

1890.....	106.6	+35.8	101.7	-9.9	97.6	+3.1
1891.....	101.6	+42.5	101.6	-9.8	100.8	- .2
1892.....	116.7	+24.1	101.6	-9.8	102.3	-1.7
1893.....	106.4	+36.1	101.6	-9.8	105.7	-4.8
1894.....	86.9	+66.6	101.6	-9.8	101.4	- .8
1895.....	105.6	+37.1	101.6	-9.8	99.7	+ .9
1896.....	93.7	+54.5	101.6	-9.8	99.8	+ .8
1897.....	89.3	+62.2	96.2	-4.8	97.3	+3.4
1898.....	86.0	+68.4	96.2	-4.8	97.8	+2.9
1899.....	103.6	+39.8	96.3	-4.9	97.8	+2.9
1900.....	106.3	+36.2	93.9	-2.4	105.8	-4.9
1901.....	112.2	+29.1	93.9	-2.4	102.6	-1.9
1902.....	138.0	+ 4.9	94.0	-2.6	100.6	.....
1903.....	144.8	.....	91.6	.....	100.6	.....

MUSICAL INSTRUMENTS, PIANOS.

1890.....	78.5	+118.9	99.5	- 9.7	107.3	+ 6.8
1891.....	89.4	+ 92.2	99.7	- 9.9	106.3	+ 6.8
1892.....	92.0	+ 86.7	99.9	-10.1	102.8	+10.4
1893.....	87.2	+ 97.0	99.9	-10.1	100.9	+12.5
1894.....	93.5	+ 83.7	100.1	-10.3	95.4	+19.0
1895.....	106.7	+ 61.0	100.2	-10.4	97.6	+16.3
1896.....	102.4	+ 67.8	100.3	-10.5	96.6	+17.5
1897.....	103.6	+ 65.8	100.3	-10.5	96.9	+17.1
1898.....	114.0	+ 50.7	100.0	-10.2	97.4	+16.5
1899.....	136.6	+ 25.8	100.1	-10.3	98.8	+14.9
1900.....	143.5	+ 19.7	97.7	- 8.1	100.8	+12.6
1901.....	149.1	+ 15.2	97.7	- 8.1	103.6	+ 9.6
1902.....	163.0	+ 5.4	96.3	- 6.7	107.4	+ 5.7
1903.....	171.8	.....	89.8	.....	113.5	.....

OIL, COTTON SEED.

1890.....	97.8	+17.4	99.6	-0.7	104.9	+0.3
1891.....	100.6	+14.1	100.0	-1.1	105.3	- .1
1892.....	100.6	+14.1	100.0	-1.1	105.3	- .1
1893.....	100.6	+14.1	100.0	-1.1	105.3	- .1
1894.....	100.6	+14.1	100.0	-1.1	98.5	+9.0
1895.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1896.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1897.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1898.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1899.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1900.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1901.....	100.6	+14.1	100.0	-1.1	96.5	+9.0
1902.....	113.8	+ 1.3	99.3	- .4	105.5	- .3
1903.....	114.8	.....	98.9	.....	105.2	.....

TABLE II.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

OIL, LINSEED.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	126.0	-28.5	100.8	+4.1	98.3	+ 8.7
1891.....	93.1	- 3.2	100.8	+4.1	98.3	+ 8.7
1892.....	101.8	-11.6	100.9	+4.0	103.6	+ 3.2
1893.....	91.9	- 2.0	99.7	+5.2	108.7	+ 3.1
1894.....	94.1	- 4.3	99.5	+5.4	102.0	+ 4.8
1895.....	95.1	- 5.3	99.6	+5.3	100.2	+ 6.7
1896.....	106.0	-15.0	99.7	+5.2	99.6	+ 7.3
1897.....	102.0	-11.7	99.7	+5.2	98.2	+ 8.9
1898.....	97.4	- 7.5	99.7	+5.2	99.1	+ 7.9
1899.....	103.6	-13.0	99.7	+5.2	97.2	+10.0
1900.....	101.3	-11.1	99.8	+5.1	97.9	- 9.2
1901.....	98.2	- 8.2	104.9	.....	106.4	+ 3.5
1902.....	94.6	- 4.8	104.9	.....	106.9	.....
1903.....	90.1	.....	104.9	.....	106.9	.....

PAINTS.

1890.....	92.2	+52.1	101.9	-2.1	98.3	+13.3
1891.....	97.4	+43.9	101.9	-2.1	98.7	+12.9
1892.....	99.6	+40.8	101.9	-2.1	98.9	+12.6
1893.....	101.3	+38.4	101.8	-2.0	100.5	+10.8
1894.....	84.7	+66.5	98.7	+6.5	107.6	+ 3.5
1895.....	100.9	+38.9	98.8	+1.0	98.8	+12.8
1896.....	94.4	+48.5	101.9	-2.1	97.5	+14.3
1897.....	101.3	+38.4	99.4	+ 4	99.3	+12.2
1898.....	112.7	+24.4	99.4	+ 4	100.0	+11.4
1899.....	121.7	+15.2	99.5	+ 3	100.5	+10.5
1900.....	139.6	+ 4	99.7	+ 1	101.3	+10.0
1901.....	103.7	+35.2	99.7	+ 1	106.4	+ 4.7
1902.....	138.8	+ 1.0	104.1	-4.1	112.3	- 8
1903.....	140.2	.....	99.8	.....	111.4	.....

PAPER AND WOOD PULP.

1890.....	92.0	+34.2	100.5	-7.8	96.5	+23.0
1891.....	95.4	+29.5	100.4	-7.7	98.8	+20.1
1892.....	98.6	+25.3	100.4	-7.7	98.6	+20.5
1893.....	100.6	+22.8	99.9	-7.2	99.7	+19.1
1894.....	93.4	+32.2	100.9	-8.1	98.7	+20.3
1895.....	100.6	+22.8	100.7	-7.9	99.2	+19.7
1896.....	103.6	+19.2	100.7	-7.9	100.6	+18.6
1897.....	107.3	+15.1	100.8	-8.0	99.8	+18.9
1898.....	105.6	+17.0	101.2	-8.4	99.3	+19.5
1899.....	102.6	+20.4	99.5	-6.8	108.6	+ 9.3
1900.....	114.9	+ 7.5	99.6	-6.9	104.7	+ 9.2
1901.....	115.4	+ 7.0	98.6	-6.0	110.9	+ 7.0
1902.....	118.3	+ 4.4	93.0	- 3	111.1	- 6
1903.....	123.5	.....	92.7	.....	118.7	.....

PLANING MILL.

1890.....	92.4	+46.5	101.2	-3.2	99.3	+14.4
1891.....	93.4	+45.0	100.4	-2.4	100.8	+12.7
1892.....	95.6	+41.6	100.5	-2.5	100.8	+12.7
1893.....	94.9	+42.7	100.1	-2.1	100.7	+12.6
1894.....	94.9	+42.7	100.6	-2.6	97.7	+13.3
1895.....	99.2	+36.5	99.3	-1.3	98.2	+13.7
1896.....	101.4	+33.5	99.4	-1.4	98.4	+13.4
1897.....	102.2	+32.5	99.7	-1.7	98.5	+14.2
1898.....	104.6	+29.4	99.5	-1.5	100.9	+12.6
1899.....	115.5	+17.2	99.2	-1.2	108.8	+ 8.4
1900.....	115.5	+17.2	99.3	-1.3	104.9	+ 8.3
1901.....	125.3	+ 8.1	99.0	-1.0	107.0	+ 8.3
1902.....	128.0	+ 6.8	98.2	- 2	110.8	+ 2.8
1903.....	135.4	.....	98.0	.....	113.6	.....

TABLE II.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

POTTERY.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Percent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Percent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Percent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	101.8	+ 1.7	99.7	-0.5	98.8	+ 9.0
1891.....	104.8	- 1.2	99.6	- .4	99.7	+ 8.0
1892.....	100.8	+ 2.7	99.7	- .5	100.1	+ 7.6
1893.....	103.1	+ .4	99.6	- .4	102.5	+ 5.1
1894.....	101.2	+ 2.3	99.6	- .4	99.6	+ 8.1
1895.....	93.3	+10.9	100.0	- .8	96.4	+11.7
1896.....	95.0	+ 8.9	100.2	-1.0	95.3	+13.0
1897.....	98.6	+ 5.0	100.6	-1.4	99.9	+ 7.8
1898.....	95.4	+ 8.5	100.6	-1.4	104.9	+ 2.7
1899.....	99.7	+ 3.8	100.4	-1.2	103.0	+ 4.6
1900.....	102.0	+ 1.5	100.1	- .9	99.8	+ 7.9
1901.....	100.7	+ 2.8	100.3	-1.1	102.4	+ 5.2
1902.....	99.5	+ 4.0	100.3	-1.1	104.6	+ 3.0
1903.....	103.5	.....	99.2	.....	107.7	.....

PRINTING AND PUBLISHING, BOOK AND JOB.

1890.....	97.3	+30.1	101.0	-7.8	97.8	+18.7
1891.....	98.5	+28.5	101.0	-7.8	99.6	+16.6
1892.....	96.9	+30.7	100.5	-7.4	99.2	+17.0
1893.....	96.9	+30.7	100.4	-7.3	100.2	+15.9
1894.....	95.0	+33.3	100.1	-7.0	99.6	+16.6
1895.....	97.0	+30.5	100.2	-7.1	99.5	+16.7
1896.....	98.2	+28.9	100.1	-7.0	100.3	+15.8
1897.....	107.0	+18.3	100.2	-7.1	99.2	+17.0
1898.....	106.2	+19.2	99.4	-6.3	101.2	+14.7
1899.....	112.2	+12.8	97.2	-4.2	103.6	+12.1
1900.....	117.0	+ 8.2	95.1	-2.1	109.3	+ 6.2
1901.....	122.0	+ 3.8	94.4	-1.4	110.7	+ 4.9
1902.....	123.9	+ 2.2	93.2	- .1	114.3	+ 1.6
1903.....	126.6	.....	93.1	.....	116.1	.....

PRINTING AND PUBLISHING, NEWSPAPER.

1890.....	105.4	+ 9.4	100.2	-4.0	102.9	+10.1
1891.....	107.2	+10.9	100.1	-3.9	99.5	+13.9
1892.....	116.2	+17.8	100.6	-4.4	98.7	+14.8
1893.....	107.4	+11.1	101.3	-5.0	98.0	+15.6
1894.....	94.7	+ .8	100.5	-4.3	97.4	+16.3
1895.....	88.7	+ 7.6	100.4	-4.2	96.4	+17.5
1896.....	97.0	+ 1.5	100.2	-4.0	98.7	+14.8
1897.....	96.3	- .8	100.0	-3.8	99.3	+14.1
1898.....	91.6	+ 4.3	99.1	-2.9	102.9	+10.1
1899.....	92.1	+ 3.7	97.9	-1.7	106.2	+ 6.7
1900.....	89.1	+ 7.2	97.6	- 1.4	106.3	+ 6.6
1901.....	90.3	+ 5.8	97.4	-1.2	106.4	+ 6.5
1902.....	96.7	+ 1.2	97.1	.9	109.3	+ 3.7
1903.....	95.5	.....	96.2	.....	113.3	.....

ROPE AND TWINE.

1890.....	94.5	+14.6	100.0	.....	99.5	+1.3
1891.....	90.1	+20.2	100.0	.....	99.5	+1.3
1892.....	103.4	+ 4.7	100.0	.....	100.0	+ .8
1893.....	107.6	+ .7	100.0	.....	99.5	+1.3
1894.....	93.9	+15.3	100.0	.....	99.7	+1.1
1895.....	104.0	+ 4.1	100.0	.....	101.8	+1.0
1896.....	104.2	+ 3.9	100.0	.....	99.7	+1.1
1897.....	102.3	+ 5.9	100.0	.....	100.1	+ .7
1898.....	97.7	+10.8	100.0	.....	99.7	+1.1
1899.....	99.3	+ 9.1	100.0	.....	100.6	+ .2
1900.....	95.0	+14.0	100.0	.....	100.9	- .1
1901.....	97.7	+10.8	100.0	.....	99.5	+1.3
1902.....	111.8	- 3.1	100.0	.....	100.6	+ .2
1903.....	108.3	.....	100.0	.....	100.8	.....

* These figures include linotype operators in the only establishment in operation the entire period. If linotype operators in other establishments where they were employed beginning at a later date were included the percentages in the later years would be largely increased.

TABLE II.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

SHIPBUILDING.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	86.7	+89.0	100.8	-3.4	97.5	+13.1
1891.....	89.7	+82.7	100.3	-2.9	97.2	+13.6
1892.....	93.0	+76.2	100.3	-2.9	97.9	+12.7
1893.....	87.0	+88.4	100.1	-2.7	98.7	+11.8
1894.....	86.0	+90.6	99.7	-2.3	96.6	+15.4
1895.....	101.3	+61.8	100.0	-2.6	101.0	+ 9.2
1896.....	91.2	+79.7	99.9	-2.5	102.0	+ 8.1
1897.....	89.3	+83.5	99.3	-1.9	104.0	+ 6.1
1898.....	122.2	+34.1	99.7	-2.3	103.8	+ 6.3
1899.....	147.6	+11.0	99.8	-2.4	102.3	+ 7.8
1900.....	156.2	+ 4.9	99.9	-2.5	102.6	+ 7.5
1901.....	159.5	+ 2.8	98.8	-1.4	104.2	+ 5.9
1902.....	169.5	- 3.3	98.2	- .8	108.2	+ 1.9
1903.....	163.9	.....	97.4	.....	110.3	.....

SILK GOODS.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	85.6	+58.8	103.0	-4.1	99.7	+5.2
1891.....	83.5	+62.8	103.0	-4.1	97.1	+8.0
1892.....	91.9	+47.9	102.1	-3.2	99.8	+5.1
1893.....	89.1	+52.5	99.0	- .2	100.5	+4.4
1894.....	93.8	+44.9	98.6	+ .2	100.1	+4.8
1895.....	105.2	+29.2	98.6	+ .2	101.9	+2.9
1896.....	103.7	+31.1	98.8	.....	101.3	+3.6
1897.....	113.2	+20.1	98.9	- .1	99.4	+5.5
1898.....	115.9	+17.3	99.1	- .3	99.7	+5.2
1899.....	120.4	+12.9	99.0	- .2	100.4	+4.5
1900.....	111.8	+21.6	99.3	- .5	100.3	+4.6
1901.....	121.0	+12.3	99.1	- .3	99.9	+5.0
1902.....	142.7	- 4.8	99.0	- .2	101.9	+2.9
1903.....	135.9	.....	98.8	.....	104.9	.....

SLAUGHTERING AND MEAT PACKING.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	89.3	+29.1	99.5	-0.3	102.2	+11.2
1891.....	90.0	+28.1	99.5	- .3	102.1	+11.3
1892.....	90.5	+27.4	99.5	- .3	102.7	+10.6
1893.....	96.9	+19.0	100.2	-1.0	103.4	+ 9.9
1894.....	99.7	+15.6	100.2	-1.0	97.9	+16.0
1895.....	101.8	+13.3	100.3	-1.1	97.8	+16.2
1896.....	103.3	+11.6	100.3	-1.1	97.6	+16.4
1897.....	106.5	+ 8.3	100.3	-1.1	98.0	+15.9
1898.....	108.9	+ 6.9	100.2	-1.0	98.0	+15.9
1899.....	107.5	+ 7.3	100.0	- .8	100.2	+13.4
1900.....	107.2	+ 7.6	100.3	-1.1	103.6	+ 9.7
1901.....	109.1	+ 5.7	100.3	-1.1	103.3	+10.0
1902.....	114.9	+ .8	99.8	- .1	107.1	+ 6.1
1903.....	115.3	.....	99.2	.....	113.6	.....

SOAP.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890.....	102.8	-11.5	96.5	+5.3	101.8	+15.3
1891.....	102.2	-11.0	96.5	+5.3	102.0	+15.1
1892.....	103.2	-11.8	96.5	+5.3	102.9	+14.1
1893.....	88.0	+ 8.4	101.6	.....	97.8	+20.0
1894.....	96.4	- 5.6	101.2	+ .4	98.3	+19.4
1895.....	100.4	- 9.4	101.6	.....	98.1	+19.7
1896.....	98.6	- 7.7	101.8	.....	98.9	+18.7
1897.....	100.3	- 9.3	101.6	.....	99.2	+18.3
1898.....	102.2	-11.0	101.6	.....	100.4	+16.9
1899.....	99.8	- 8.8	101.6	.....	100.7	+16.6
1900.....	96.2	- 5.4	101.6	.....	101.1	+16.1
1901.....	89.7	+ 1.4	101.6	.....	116.0	+ 6.7
1902.....	89.7	+ 1.4	101.6	.....	111.5	+ 8.3
1903.....	91.0	.....	101.6	.....	117.4	.....

TABLE III.—SUMMARY OF WAGES AND HOURS OF LABOR, 1890-1903, BY INDUSTRIES—Continued.

[Average, 1890-1899=100.0. For explanation of relative figures, see pages 715 and 716; for explanation of increase (+) or decrease (-) in 1903, as compared with previous years, see note on page 718.]

STOVES.

Year.	Employees.		Hours per week.		Wages per hour.	
	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative number.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.	Relative.	Per cent of increase (+) or decrease (-) in 1903 as compared with year specified.
1890	88.2	+34.4	100.3	-0.1	93.4	+33.4
1891	113.0	+ 4.9	99.8	+ .4	95.3	+30.7
1892	110.9	+ 6.9	100.2	.....	95.5	+30.5
1893	107.0	+10.7	99.7	+ .5	99.2	+25.6
1894	80.9	+46.5	99.9	+ .3	95.9	+29.9
1895	103.1	+14.9	99.9	+ .3	98.2	+26.9
1896	101.2	+17.1	100.1	+ .1	97.4	+27.9
1897	86.7	+36.7	100.0	+ .2	103.1	+20.9
1898	99.7	+18.9	100.1	+ .1	106.4	+17.1
1899	111.9	+ 5.9	100.0	+ .2	115.5	+ 7.9
1900	110.9	+ 6.9	100.2	.....	113.2	+10.1
1901	120.6	- 1.7	100.2	.....	121.1	+ 2.9
1902	133.9	-11.5	100.2	.....	121.6	+ 2.5
1903	118.5	.....	100.2	.....	124.6	.....

STREETS AND SEWERS, CONTRACT WORK.

1890	102.3	+ 1.6	101.2	-6.9	96.7	+35.9
1891	121.7	-14.6	101.4	-7.1	99.0	+47.6
1892	112.3	- 7.5	101.3	-7.0	99.2	+32.5
1893	109.7	- 5.3	101.0	-6.7	96.9	+35.6
1894	107.3	- 3.2	101.0	-6.7	98.0	+34.1
1895	91.1	+14.1	100.6	-6.4	99.5	+32.1
1896	98.9	+ 5.1	99.7	-5.5	104.0	+26.3
1897	85.6	+21.4	97.4	-3.3	104.8	+25.4
1898	81.4	+27.6	97.5	-3.4	106.3	+23.6
1899	89.6	+16.0	99.0	-4.8	106.0	+24.0
1900	99.4	+ 4.5	98.8	-4.7	108.2	+21.4
1901	100.1	+ 3.8	95.4	-1.3	118.7	+10.7
1902	100.8	+ 3.1	91.2	.....	126.5	+ 3.9
1903	103.9	.....	94.2	.....	131.1	.....

STREETS AND SEWERS, MUNICIPAL WORK.

1890	89.7	- 2.6	100.6	-8.1	99.9	+11.9
1891	87.7	- 3	100.5	-8.0	91.5	+12.4
1892	98.4	-11.2	100.4	-7.9	98.5	+13.5
1893	104.2	-16.1	100.8	-8.2	98.3	+13.7
1894	115.8	-24.5	100.7	-8.1	100.9	+10.8
1895	104.7	-16.5	100.2	-7.7	99.6	+12.2
1896	102.6	-14.8	100.1	-7.6	98.4	+13.6
1897	101.7	-14.1	100.5	-8.0	98.6	+13.4
1898	93.4	- 6.4	99.9	-7.4	100.6	+11.1
1899	101.9	-14.2	96.4	-4.0	105.7	+ 5.8
1900	100.8	-13.3	93.9	-1.5	110.2	+ 1.5
1901	105.7	-17.3	93.2	- .8	110.6	+ 1.1
1902	94.1	- 7.1	93.2	- .8	111.0	+ .7
1903	87.4	.....	92.5	.....	111.8	.....

TOBACCO, CIGARETTES.

1890	89.9	+58.4	100.0	+0.1	92.8	+21.0
1891	90.6	+57.2	100.0	+ .1	93.1	+20.6
1892	92.7	+53.6	100.0	+ .1	93.5	+20.1
1893	97.2	+46.5	100.0	+ .1	93.3	+20.4
1894	99.1	+43.7	100.0	+ .1	99.3	+13.1
1895	100.6	+41.6	100.0	+ .1	99.3	+13.1
1896	104.7	+36.0	100.0	+ .1	103.5	+ 8.5
1897	107.6	+32.3	100.1	.....	105.9	+ 6.0
1898	108.3	+31.5	100.1	.....	110.0	+ 2.1
1899	110.3	+29.1	100.1	.....	109.4	+ 2.7
1900	114.4	+24.5	100.1	.....	110.3	+ 1.8
1901	123.5	+15.3	100.0	+ .1	112.2	+ .1
1902	117.6	+21.1	100.0	+ .1	111.5	- 1.9
1903	142.4	.....	100.1	.....	102.3	.....

and Libby, McNeill & Libby, and the executive boards of the Amalgamated Meat Cutters and Butcher Workmen of North America and the Packing Trades Council in joint session, shall govern all relations between both parties thereto for a period of one year from the date of this agreement.

FIRST. That no business agent shall request to see help during working hours, and under no consideration to visit any department without permission from the superintendent's office.

SECOND. That in case of any disagreement or misunderstanding there is to be no cessation of work in any department pending investigation and settlement. All cases of this kind to be taken up at an hour agreeable to and designated by the various houses.

THIRD. That in the absence of any skilled man those doing the same kind of work will attempt to make up the loss in the amount of work caused by such absentee.

FOURTH. That the present system of piecework remain during the life of this agreement in the departments where it now exists.

FIFTH. It is mutually agreed that the quality of workmanship shall be kept up to the highest possible standard.

SIXTH. That if men absent themselves unnecessarily such absence shall be considered sufficient cause for dismissal, subject to reasonable exceptions.

SEVENTH. That the good offices of the organization shall be used to have the men work steadily, as in former years, thereby avoiding many unnecessary expenses and delays. Furthermore, that any skilled workman shall notify his foreman whenever possible whenever he finds it necessary to absent himself from work.

Signed, _____	SWIFT AND COMPANY.
_____	ARMOUR & COMPANY.
_____	NELSON MORRIS & Co.
_____	NATIONAL PACKING COMPANY.
_____	SCHWARZSCHILD & SUIZBERGER.
_____	CUDAHY PACKING COMPANY.
_____	LIBBY, MCNEILL & LIBBY.

Signed, _____.

_____.

_____.

_____.

_____.

_____.

AGREEMENT BETWEEN THE NATIONAL WHOLESALE TAILORS' ASSOCIATION AND THE BROTHERHOOD OF CUSTOM CUTTERS AND TRIMMERS TO THE TRADE, LOCAL UNION NO. 21, OF THE UNITED GARMENT WORKERS OF AMERICA.

This agreement made and entered into this sixth day of February, 1904, by and between the National Wholesale Tailors' Association of the city of Chicago, and its members, parties of the first part; and the Brotherhood of Custom Cutters and Trimmers to the Trade, Local Union No. 21 of the United Garment Workers of America, and all of its members, parties of the second part;

Witnesseth that

Whereas the parties of the first part are in the wholesale tailoring business in the city of Chicago, and the parties of the second part are employed by the wholesale tailoring houses of the said association; and

Whereas the parties hereto are desirous of forming a working agreement for the purpose of insuring peace and harmony and benefiting equally all of the parties hereto.

Now, therefore, it is mutually covenanted and agreed by and between the parties hereto as follows, to wit:

FIRST. Parties of the first part recognize the Brotherhood of Custom Cutters and Trimmers to the Trade, Local Union No. 21, of the United Garment Workers of America, and covenants and agrees to employ in their cutting and trimming departments only members of the said local union.

SECOND. It is agreed by the parties hereto that a week's work shall consist of forty-eight (48) hours, ending twelve (12) o'clock noon Saturday.

THIRD. It is agreed that the following holidays shall be observed: Decoration Day, Fourth of July, Labor Day, Thanksgiving, Christmas and New Years, and not to work on Labor Day. Members of said Local No. 21 receiving regular pay for each and all of them.

FOURTH. It is agreed that members of Local No. 21 shall be paid time and one-half (1½) for all overtime and double pay for Sunday and holiday work. Meaning and intending hereby that members of said Local Union No. 21 working on a Sunday or a holiday, shall receive a double day's pay for such Sunday or holiday work.

FIFTH. It is agreed that the salaries shall be paid to the members of Local Union No. 21 weekly on every Saturday or Monday at the option of the employee.

SIXTH. No employer shall discharge any member of Local Union No. 21 who has been in his employ two successive seasons of sixty days each, without first giving such member one week's notice or one week's pay, meaning and intending that the week's notice must be given the employee before twelve thirty (12.30) p. m. o'clock of the Saturday preceding the week said employee is to be discharged, and to pro rate the lay-off each dull season equally between such members of Local No. 21 as shall be retained in his employ.

SEVENTH. It is agreed that the wage scale shall be as follows:

Suit cutters shall receive not less than twenty dollars (\$20) per week. Pants cutters not less than eighteen dollars (\$18) per week. Trimmers not less than fourteen dollars (\$14) per week. No cutter or trimmer shall receive less than his present salary while with his present employer during the term of this contract. Nothing herein mentioned, however, shall prevent any member of Local No. 21 from exercising his privilege of asking an advance in salary. All members of said Local Union No. 21 employed under the terms of this contract agree to devote themselves conscientiously and diligently to the discharge of their duties to the best of their ability, the amount of work not be governed by any rules or regulations that Local No. 21, its officers, business agent or stewards have adopted, or may adopt, at any time during the period of this contract. It is agreed and understood by and between the parties hereto that in case of unavoidable casualties or labor troubles salaries of the members of Local No. 21 shall cease immediately until such trouble is settled.

EIGHTH. It is agreed that in the event of a misunderstanding or any dispute arising as to the construction of this working agreement, or any misunderstanding in regard to the operation or enforcement of this contract between the parties hereto, or as to all differences of opinion in regard to any section of this contract, between any of the members of the parties of the first part and the members of the parties of the second part, no house shall lock out any member of said Local Union No. 21, and no executive board or business agent shall declare a strike, and said Local No. 21 shall not declare a strike, but such misunderstanding, dispute, or difference of opinion shall be referred within twenty-four (24) hours to the respective executive boards of the parties to this contract for settlement, and in case such executive boards fail to settle such controversy within twenty-four (24) hours after the same shall have been submitted to them, it is agreed that each executive board shall, within said second twenty-four (24) hours name an arbitrator, who may be a member of said executive board, and the two arbitrators so selected shall as speedily as possible name one disinterested person who shall not be a manufacturer or a member of any labor organization, and the three so selected shall within ten days' time settle the difficulty, and the decision so rendered shall be binding on all parties to this agreement.

NINTH. It is further agreed by the party of the second part that no further or other demands shall be made upon the National Wholesale Tailors' Association, or any of its members, until the expiration of this contract, or engage in any sympathetic strike except for union principles. The question as to whether or not a union principle is involved shall be submitted to arbitration, as provided in the eighth section of this contract, before a strike is called.

This contract shall be in effect from March 1st, A. D. 1904, until June 1st, A. D. 1905.

Signed in duplicate, February 6, 1904.

The National Wholesale Tailors' Association:

JOS. C. LAMM, *Vice-Pres.*
ED. V. PRICE, *Chairman Ex. Board.*
HENRY X. STRAUSS, *Secretary.*
EMILE J. ROSE.
MAURICE M. STRAUSS
M. L. OBERNDORF.
J. T. SKINNER.
MORRIS VEHOX.

The Brotherhood of Custom Cutters and Trimmers to the Trade, Local Union No. 21, United Garment Workers of America:

J. J. SONSTEBY, *President.*
W. A. OLIVEY, *Sec'y-Rep.*

EXECUTIVE BOARD:

A. S. LANGILLE, *Chairman.*
FRANK PANKRATZ.
JOHN A. HALLINEN.
FRANK KOHL.
GEORGE H. ALEXANDER.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

NEW JERSEY.

Twenty-fourth Annual Report of the Bureau of Statistics of Labor and Industries of New Jersey, for the year ending October 31, 1901.
William Stainsby, Chief. vi, 516 pp.

The subjects presented in this report are: Statistics of manufactures, 130 pages; steam railroad transportation, 11 pages; fruit and vegetable canning, 11 pages; current graded weekly wages, 113 pages; cost of living, 17 pages; trade unions, 48 pages; diseases and disease tendencies of occupations, 53 pages; labor chronology, 102 pages; labor legislation and decisions of courts, 10 pages.

STATISTICS OF MANUFACTURES.—Returns were secured from 1,621 establishments representing 85 general industries, and 54 establishments classed as miscellaneous. The facts are grouped in nine tables, as follows: Firms and corporations, partners and stockholders, by industries; capital invested and value of materials and products; three tables showing smallest, greatest, and average number of employees, by industries, and aggregates by months; wages paid and average yearly earnings; classified weekly wages; hours of labor, days in operation, and proportion of business done, and a summary of the foregoing facts for nine principal industries. Additional tables show the aggregate quantities of specified articles of stock used, with their aggregate cost, and the aggregate quantities of specified articles of goods made, with their aggregate selling value. The data are for the year 1900.

Of the 1,675 establishments, 1,674 reported \$263,974,031 capital invested; 1,671 establishments reported value of materials used at \$242,885,017, and value of products at \$407,595,280. The average number of employees in all establishments was 176,268. A total of \$77,118,902 was paid in wages during the year, and the average yearly wages of employees were \$437.51. For the total establishments considered the average days in operation for the year were 288.20, the average hours worked per day 9.64, and the average proportion of business done was 76.24 per cent.

The table following presents, by sex, the number and per cent of persons employed in all industries (1,675 establishments) at the specified weekly rates of wages:

NUMBER AND PER CENT OF EMPLOYEES OF EACH SEX IN 1,675 ESTABLISHMENTS, BY CLASSIFIED WEEKLY WAGES, 1900.

Classified weekly wages.	Males.		Females.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$5.....	15,473	10.60	19,333	38.96	34,806	17.78
\$5 or under \$6.....	6,251	4.28	9,226	18.60	15,477	7.90
\$6 or under \$7.....	7,992	5.47	7,158	14.43	15,150	7.74
\$7 or under \$8.....	14,378	9.84	4,757	9.59	19,135	9.77
\$8 or under \$9.....	13,416	9.17	2,996	6.04	16,412	8.36
\$9 or under \$10.....	19,260	13.17	2,423	4.87	21,683	11.08
\$10 or under \$12.....	19,201	13.13	2,142	4.32	21,343	10.90
\$12 or under \$15.....	21,585	14.77	1,229	2.48	22,814	11.55
\$15 or under \$20.....	19,894	13.60	325	.66	20,219	10.33
\$20 or over.....	8,733	5.97	26	.05	8,759	4.47
Total.....	146,183	100.00	49,615	100.00	195,798	100.00

Of the females employed in the manufactures of the State, 38.96 per cent received less than \$5 per week, and 57.56 per cent of the whole number received less than \$6. About 11 per cent of the males received less than \$5 per week, presumably mostly boys. More than 60 per cent of the males are found in the groups receiving \$9 per week and upward, while in the groups between \$5 and \$9 per week are found 28.76 per cent of the males.

Since the statistics of manufactures are a manufacturing census of the State taken every twelve months, and include practically every establishment in which manufacturing is carried on, it becomes possible to make comparisons from year to year. The returns show that capital invested increased in 1900 over 1899 by \$8,284,481, cost of materials by \$41,983,077, value of products by \$52,129,310, and total wages paid by \$1,030,621.

STEAM RAILROAD TRANSPORTATION.—For the year ending June 30, 1901, the seven railroads in the State employed 32,405 persons for an average of 305 days per person, each working an average of 10.7 hours per day. The total paid in wages amounted to \$18,064,986, the average wages per day being \$1.83, and the average yearly earnings \$557.47. Five of the companies reported casualties among employees while on duty as 72 killed and 974 injured.

FRUIT AND VEGETABLE CANNING.—In 1900 the 48 canneries of the State reported an invested capital of \$897,104. They gave employment to 6,428 people—2,395 males and 4,033 females—and paid out in wages a total of \$286,832. The selling value of the product was \$1,480,751.

CURRENT GRADED WEEKLY WAGES.—This is a presentation of the weekly wages paid in 1901, in certain selected cities and towns of the State, to persons engaged in 160 named occupations, with hours of labor per day, number of days employed per week, and number of Sundays

worked during the year. Notice is also taken of the nature of disease tendencies where such are found to be associated with or peculiar to any industry. The number of persons employed in the various lines of industry and for whom wages are given is 20,378—17,983 males and 2,395 females. Of the total, 4,264 were under 18 years of age.

The following table presents, by sex, the number and per cent of persons employed at the specified weekly rates of wages:

NUMBER AND PER CENT OF PERSONS OF EACH SEX EMPLOYED IN 160 SELECTED OCCUPATIONS, BY CLASSIFIED WEEKLY WAGES, 1901.

Classified weekly wages.	Males.		Females.		Total.	
	Number.	Percent.	Number.	Percent.	Number.	Percent.
Under \$5.....	2,183	12.2	782	32.6	2,965	14.6
\$5 or under \$6.....	322	1.6	306	12.8	628	3.1
\$6 or under \$7.....	848	4.8	372	15.5	1,220	6.0
\$7 or under \$8.....	1,109	6.1	291	12.2	1,400	6.9
\$8 or under \$9.....	1,147	6.3	218	9.1	1,365	6.7
\$9 or under \$10.....	3,302	18.5	159	6.7	3,461	17.0
\$10 or under \$11.....	2,156	11.9	148	6.3	2,304	11.3
\$11 or under \$12.....	198	1.3	1	.....	199	1.0
\$12 or under \$13.....	2,004	11.2	61	2.6	2,065	10.1
\$13 or under \$15.....	647	3.6	10	.4	657	3.2
\$15 or under \$20.....	1,743	9.6	38	1.5	1,781	8.7
\$20 or over.....	2,324	12.9	9	.3	2,333	11.4
Total.....	17,983	100.0	2,395	100.0	20,378	100.0

Of the males 12.2 per cent and of the females 32.6 per cent received less than \$5 per week. The proportion of males receiving less than \$9 per week was 31.0 per cent and of females 82.2 per cent.

COST OF LIVING.—This is a continuation of the presentation of previous years, and shows the retail prices of 52 items of food and other commodities in the principal markets in all counties of the State in the month of June, 1901. Summary comparisons with 1898, 1899, and 1900 are also given.

TRADE UNIONS.—Under this head are given 10 tables, showing membership, rates of wages, hours of labor, and benefit features of 63 labor organizations in the State, with extended analysis. The membership of these unions was 13,380. For the year ending May 30, 1901, 38 unions had a total income of \$35,906.78, and 41 unions paid to the national union \$19,556.43. Benefits to the amount of \$13,011.13 were paid by the 43 unions which reported on this point, but it is believed that these figures do not represent more than one-half of the sum actually paid out. As a result of organization, the unions report generally a reduction in hours of labor and an increase of wages.

DISEASES AND DISEASE TENDENCIES OF OCCUPATIONS.—This section of the report is devoted to an inquiry into diseases and disease tendencies of occupations in the glass and in the fur and felt-hat industries. The information was furnished by owners or managers of the establishments represented, and also by physicians who practice largely among the workmen engaged in these industries. The workman's version of

how his health is affected by the conditions surrounding his labor is given in a monograph on each of the industries treated.

LABOR CHRONOLOGY.—Under this caption is presented a brief account of each of the 128 strikes that occurred throughout the State from October, 1900, to August, 1901. Eighteen of the strikes were in the silk trade, 29 among machinists, 47 in the building trades, and 34 among other trades. A shorter work day, increase of wages, and to prevent the employment of nonunion men were the principal objects sought to be attained by the strikers. Following the record of strikes is a list of the new factories erected or in course of erection in various parts of the State, factories that have moved out of the State, factories that have gone into the hands of receivers, and factories that have been permanently closed. The record covers parts of 1900 and 1901.

LABOR LEGISLATION AND DECISIONS OF COURTS.—This consists of a reproduction of the labor legislation enacted at the session of 1901 and recent decisions of the New Jersey courts on cases affecting the interests of labor.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

GERMANY.

The German Workmen's Insurance as a Social Institution. Part I, Origin and Social Importance, 31 pp.; Part II, Statistics of the Workmen's Insurance, 36 pp.; Part III, Prevention of Accidents and Workmen's Hygiene, 23 pp.; Part IV, Workmen's Insurance and National Health, 28 pp.

The Workmen's Insurance of the German Empire, Catalogue and Guide, 36 pp.

Guide to the Workmen's Insurance of the German Empire, 45 pp.

These six pamphlets were prepared by officials of the German imperial insurance office, and were published in the English and German languages for distribution at the Universal Exposition at St. Louis. The information contained in these pamphlets, as the titles indicate, gives a general idea of the origin and scope of the German workingmen's insurance system, its advantages, and its practical operation. The catalogue and guide give a list and indicate the location of the various exhibits of the German imperial insurance office in the department of education and social economy and reproduce some of the figures found in the tables and charts exhibited.

The operations of the German insurance system, outlined in these pamphlets, are considered in greater detail in the work entitled *Einrichtung und Wirkung der Deutschen Arbeiterversicherung*, which was also prepared for distribution at the St. Louis Exposition. A digest of this work appears below.

Einrichtung und Wirkung der Deutschen Arbeiterversicherung.

Dritte unveränderte Ausgabe, vermehrt durch einen den neuesten Stand der Gesetzgebung und Statistik umfassenden Anhang. Für die Weltausstellung in St. Louis 1904, im Auftrage des Reichs-Versicherungsamts bearbeitet von Prof. Dr. Ludwig Lass und Prof. Dr. Friedrich Zahn. Berlin, 1904. ix, 274 pp.

This is the third and revised edition of a volume on workingmen's insurance in Germany prepared by direction of the imperial insurance office. The first part, which relates to the present organization of the labor insurance system in Germany, was prepared by Dr. L. Lass, of

the imperial insurance office, and the second part, the practical results of the system, was prepared by I of the imperial statistical office. A statistical survey of labor insurance, which completes the volume, was prepared by G. A. Klein, of the imperial insurance office. The date of March, 1904, and is, therefore, the latest work which has been approved by the German insurance

ORGANIZATION.—The German workingmen's insurance is divided into three parts, viz, the sick, the accident and invalidity insurance. Although each one of them is based on different laws, together they constitute a unified system which complements each other.

Previous to the introduction of the national law there had been a number of attempts made to provide relief for inability caused by sickness, accident, and invalidity. Laws were enacted requiring employers to provide sick benefits for their employees, seamen, etc., while mutual relief societies were made by miners, by the guilds of handicraftsmen, and by other societies. Accident relief was provided by the imperial liability law of 1871, but except in the case where the employer was not responsible for the negligence of the injured person. Relief for invalidity and disability was provided in the form of public charity.

The compulsory sick insurance includes practically all persons employed for wages in commerce, industry, and agriculture. Workingmen are required to be insured regardless of their wages. Foremen, technical experts, and positions must be insured if their wage or salary is less than 1 mark (\$1.59) per day, or 2,000 marks (\$476) per year. Insurance is allowed in a few cases.

To secure the enrollment of individuals to whom the sick insurance law applies, employers in industries are required to send to the proper insurance fund a card when a person who enters or leaves their service. Neglect in this respect is punishable by a fine, and incurs liability for any sick person not enrolled.

It was found impossible to effect the sick insurance for the whole Empire in one organization, as the conditions varied so greatly that eight different forms of organization were finally adopted and are now in use.

The most important of these in point of membership are the sick funds (*Orts-Krankenkassen*). These funds are corporations organized to execute the provisions of the law and have the rights and duties of legal persons. They are established for persons in one or more industries in

such as the masons, the weavers, etc., or for all employees of a given type of industry, such as the factory employees, or those engaged in the hand-working trades. The membership in these funds is limited to workingmen, though the employers have a voice in the management of the organizations.

The most numerous funds are those known as establishment sick funds (*Betriebs-Krankenkassen*). Each of these organizations includes the employees of but one establishment, though an establishment must have not less than 50 employees to be entitled to form such a fund. If the industry is classified among the dangerous trades, the employer is required to institute a separate fund for his establishment. Certain duties are imposed on the employer, such as bearing the expense of administration and of making advances of money in case of deficit; otherwise the operation of this kind of fund is similar to that of the local sick fund.

The other organizations are known as building trades sick funds (*Bau Krankenkassen*), guild sick funds (*Innungs-Krankenkassen*), miners' provident funds (*Knappschaftskassen*), registered auxiliary funds (*Eingeschriebene Hilfskassen*), auxiliary funds authorized by the laws of various German States (*Landesrechtliche Hilfskassen*), and parish sick insurance funds (*Gemeinde-Krankenversicherung*). The last-mentioned funds are intended for persons not insured in any of the other above-named funds. The parish fund is part of the parish administration. The parish officials carry on the work of the fund, the parish pays the cost of administration, and, in case of deficit, advances the amount necessary to meet the same. These eight forms of organization are allowed to form federations for the purpose of reducing the cost of administration or improving their medical service.

The benefits offered by the sick funds vary in amount, but all of them are required to provide the following as a minimum: (1) Free medical attendance, free medicines, and free medical supplies of the smaller sort (bandages, eyeglasses, etc.). These are provided from the first day of sickness. (2) In case the sickness causes inability to work, the fund pays a sick benefit equal to one-half of the wage rate which was used in calculating the member's dues. This benefit begins the third day after the disability sets in, and continues for twenty-six weeks. Instead of receiving medical treatment at home a member is entitled to treatment at a hospital, in which case an amount not exceeding one-half of his daily wage is paid to his dependents. Female members receive similar benefits for a period of six weeks following confinement. (3) In case of death a funeral benefit equal to twenty times the amount of his daily wage, but not less than 50 marks (\$11.90), is paid to the heirs of a member.

The income of the sick funds is derived from the dues of members. The amount of the dues is fixed by each fund for its own members.

but it may not exceed from 3 to 4½ per cent of the member's wage. Provision is made, however, for a possible future increase to 6 per cent. The employee pays two-thirds of the dues and the employer one-third. The employee's share is deducted from his wages and paid direct to the insurance fund by the employer when the latter remits his own share.

The accident insurance now includes nearly all workingmen engaged in industry, agriculture, forestry, transportation by land and water, and sea and coast fisheries. In general, it does not include persons engaged in commerce as such, in the handicraft trades, or in domestic service. All workingmen and technical experts earning less than 3,000 marks (\$714) per annum are required to be insured.

This insurance is administered by associations of employers known as mutual trades associations (*Berufsgenossenschaften*). These include all employers engaged in one industry, as, for example, the Chemical Industries Association, the Brewing and Malt Industries Association, etc. In other cases associations exist for certain districts, such as the Wood Industries Association of Saxony. These associations elect their own officers and have a large measure of self-administration, though the federal government exercises a careful supervision over their actions and financial standing. There are now 66 industrial and 48 agricultural associations.

In case of accident to an insured person, the benefits described above are paid by the sick insurance fund for the first thirteen weeks of disability. From the beginning of the fifth week to the end of the thirteenth week the sick fund is required to increase the amount of its benefit from one-half to two-thirds of the earnings of the injured person. The difference between these two amounts is later returned to the sick fund by the employer. Beginning with the fourteenth week, the trades association provides the following benefits: (1) Free medical treatment, free medicines, and free medical supplies; (2) a pension during the continuation of the disability, whether the disability is partial or complete. In case of complete disability, the pension is equal to two-thirds of the earnings of the injured person; in case of partial disability, the insured receives a fraction of the above pension, proportioned to the degree of disability.

In case the accident results in death, the following benefits are paid: (1) A funeral benefit of not less than 50 marks (\$11.90); (2) a pension to the dependents of the deceased beginning with the day of death. The widow and each child receive 20 per cent of the earnings of the deceased, though the sum of these pensions may not exceed 60 per cent of such earnings. The claim of the widow is not valid if the marriage took place after the accident occurred. If the widow remarries, she is granted three times the amount of her annual pension as a marriage portion. The children's pension is paid until they have completed their fifteenth year of age.

The workingmen's share of the expense of the accident insurance consists of the benefits paid out of the sick insurance fund to the injured person during the first thirteen weeks of disability. Otherwise all expenses are defrayed by the employers' associations. The income of the associations is secured by an annual assessment on each employer for his share of the association's expense during the preceding year. The share of the employer is determined from the amount of his pay roll and the danger rate of the occupation or industry, although the agricultural, forestry, and shipping industry associations are permitted to use other methods if they desire. Because of the irregular character of employment in the building trades, the employers' associations in that industry use a premium system instead of the assessment system. A system of investigating each accident with reference to claims for benefits is provided for, as well as special courts for deciding disputes in connection with the insurance laws.

The old age and invalidity insurance includes practically all those persons engaged in agriculture, industry, commerce, domestic service, and the civil service of the State who hold a subordinate position, such as that of workingman or technical expert. The invalidity insurance is administered by "insurance institutes" (*Versicherungsanstalten*). These are 31 in number, each having a separate district. In addition, there are 9 special funds for mining and railway employees. The institutes are corporations possessing the rights of legal persons. Their funds are the security for the performance of their obligations. Though their constitutions and by-laws must be approved by the imperial insurance office, they are almost wholly self-governing.

The benefits of the invalidity insurance are as follows: (1) An invalidity pension; (2) an old age pension; (3) repayment of dues; (4) free medical treatment; (5) miscellaneous assistance.

The invalidity pension is paid without regard to age to those persons whose earning capacity has been permanently reduced to less than one-third. The pension is also paid to those who have been in a state of disability for 26 weeks, and continues as long as the disability lasts. To be eligible for this pension the insured person must have been a member of the institute for 200 weeks, in which time not less than 100 payments of weekly dues must have been made. If this condition has not been complied with, the membership must have existed for 500 weeks. If the disability has been incurred purposely, the right to a pension ceases.

The pension or annuity consists of two parts: First, an annual subsidy of 50 marks (\$11.90), paid by the Empire and added to each pension granted by the institutes; second, the pension granted by the institutes. The latter is calculated in the following manner: Members are divided into five classes on the basis of the wages received. Each class pays a different rate of dues and receives benefits in proportion.

In calculating the pension each wage class receives a certain amount called the base or initial sum, which is increased for each payment of weekly dues. The lowest invalidity pension granted is 116.40 marks (\$27.70). After paying dues for 50 years, the pensions range from 185.40 marks (\$44.13) to 450 marks (\$107.10).

The old age pension is paid without regard to earning capacity when the seventieth year of age is completed. Members must have paid dues for a "waiting time" of 1,200 weeks before they are eligible for such a pension. Provision is made for those persons who reach the age of 70 years before the law has been in operation for the "waiting time" of 1,200 weeks.

One-half of the dues may be returned: (1) To female members who marry and who have been members for 200 weeks; (2) to permanently disabled persons who receive a pension from the accident insurance; (3) to the heirs of a member who dies before receiving a pension and who has paid dues for 200 weeks.

The other benefits of the invalidity insurance consist of medical treatment and other assistance to insured persons with the view of preventing or removing disability. The dues of members range from 14 pfennigs to 36 pfennigs ($3\frac{1}{2}$ cents to $8\frac{1}{2}$ cents) per week according to the wage class in which the member is enrolled. One-half of the amount is paid by the employer and one-half by the employee.

A careful review of the different features of the insurance system is given and the reasons for the adoption of certain methods are discussed in the work. Special emphasis is laid on the efforts which have been made to secure the active cooperation and services of both employers and workingmen in the administration of the insurance. The financial soundness of the system is secured by making the employers, the guilds, and the parishes eventually responsible for any deficit in the various forms of sick insurance organizations. The national, State, and local governments guarantee the payment of claims against the accident and invalidity insurance organizations. One noteworthy feature of the system is the extensive use which is made of the postal service in connection with the accident and invalidity insurance. The stamps by which dues are paid are sold by the post-offices, and payments of pensions and other benefits are made free of charge through the money-order service.

PRACTICAL RESULTS.—The effects of the insurance system are treated at some length. According to the author of this part of the report the financial status of the workingmen has been improved, at least to the extent of the benefits received from the amounts contributed by the employers and the government. Experience has shown that employers have not deducted their share of the dues from wages.

The hygienic condition of the workingmen has been improved, both on account of the safeguards which the accident insurance requires

employers to use and on account of the efforts made by the sick funds to reduce the sick rate among members. The general knowledge in regard to matters pertaining to health which the sick funds have disseminated by means of circulars, lectures, etc., has acted in a preventive manner, while the immediate and often elaborate medical service of the funds has been such as the means of the workingmen could but seldom have secured.

In the field of housing of the working people the invalidity organizations have rendered assistance by investing part of their funds in improved dwellings.

The effect of the insurance on the employer has been, first of all, to add to his financial burdens. During the period 1885 to 1900 it is estimated that the employers have paid not less than 1,500,000,000 marks (\$357,000,000) in contributions, etc. The demands on the employers, however, have not been too heavy, nor have they injured Germany's ability to compete in foreign markets.

As to the actual amount of this burden, one authority estimates that the amount paid by the employer for accident insurance is 3 per cent of the wages, for sick insurance $1\frac{1}{2}$ per cent of the wages, and for invalidity insurance 1 per cent of the wages, making a total of $5\frac{1}{2}$ per cent of the wages added to the cost of production. The author concludes that this burden has not been shifted to wages, nor has it resulted in higher prices to the consumer, but has been made up by improvements in methods of production.

The following tables reproduce the greater part of the data contained in the statistical summary given at the end of the volume:

COMPENSATION PAID BY THE GERMAN WORKINGMEN'S INSURANCE.

Year.	Sick insurance.			Accident insurance.		
	Sick relief.	Other relief.	Total relief.	Sick relief.	Pensions and other relief.	Total relief.
1885	\$12,533,931	\$351,225	\$12,885,156	\$4	\$4,738	\$4,762
1886	13,987,765	290,960	14,278,665	66,902	388,935	455,837
1887	14,473,690	316,049	14,789,739	172,941	1,239,096	1,412,037
1888	16,010,771	303,919	16,314,690	254,270	2,052,403	2,306,673
1889	18,293,852	294,280	18,588,132	351,013	3,097,436	3,448,449
1890	21,641,963	337,687	21,979,650	492,968	4,330,669	4,823,637
1891	23,122,070	349,623	23,471,693	625,712	5,674,409	6,300,121
1892	24,554,299	396,046	24,950,345	788,285	6,921,819	7,710,104
1893	26,458,062	349,154	26,807,206	909,522	8,200,773	9,110,295
1894	25,773,413	330,979	26,104,392	1,038,837	9,552,468	10,591,305
1895	27,132,316	359,782	27,492,098	1,105,826	10,899,403	12,005,229
1896	28,255,218	323,992	28,579,210	1,284,032	12,437,543	13,721,575
1897	31,045,406	358,208	31,403,614	1,379,950	13,992,616	15,372,566
1898	33,005,984	190,174	33,196,158	1,448,938	15,623,524	17,072,461
1899	37,593,886	599,660	38,193,546	1,532,582	17,317,072	18,869,654
1900	41,005,800	625,765	41,631,565	1,646,951	19,142,730	20,789,671
1901	42,949,066	646,394	43,595,450	1,848,230	21,785,449	23,633,669
1902			43,418,589	2,001,331	24,734,348	25,735,679
1903			43,418,589			28,162,852

^a Estimated.

COMPENSATION PAID BY THE GERMAN WORKINGMEN'S INSURANCE—Concluded.

Year.	Old-age and invalidity insurance.			Total compensation paid by the insurance system.		
	Sick relief.	Pensions and other relief.	Total relief.	Sick relief.	Pensions and other relief.	Total relief.
1885				\$12,533,935	\$355,983	\$12,889,918
1886				14,054,667	679,855	14,734,522
1887				14,646,631	1,555,146	16,201,777
1888				16,265,041	2,356,322	18,621,363
1889				18,644,865	3,391,716	22,036,581
1890				22,134,931	4,688,356	26,823,287
1891	889	\$3,641,193	\$3,641,282	23,747,871	9,665,226	33,413,097
1892	7,588	5,322,625	5,330,213	25,350,172	12,640,491	37,990,663
1893	25,785	6,643,224	6,669,009	27,393,359	15,193,151	42,586,510
1894	86,769	8,199,436	8,286,205	26,899,019	18,082,883	44,981,902
1895	150,365	10,007,635	10,158,000	28,388,507	21,266,819	49,655,326
1896	279,770	11,934,881	12,214,651	29,819,020	24,696,416	54,515,436
1897	448,775	13,805,957	14,254,732	32,874,131	28,156,781	61,030,912
1898	625,881	15,781,940	16,407,821	35,080,803	31,895,637	66,976,440
1899	955,917	17,764,360	18,720,277	40,082,385	35,701,092	75,783,477
1900	1,344,396	20,725,169	22,069,565	43,997,147	40,493,654	84,490,801
1901	1,743,137	23,311,452	25,054,589	46,540,414	45,743,294	92,283,708
1902	2,218,822	26,439,737	28,658,559			28,658,559
1903			\$31,906,097			\$31,906,097

a Estimated.

INCOME, EXPENDITURES, AND INVESTED FUNDS OF THE INSURANCE SYSTEM.

Items.	Sick insurance, 1901.	Accident insurance, 1902.	Old-age and invalidity insurance, 1902.	Total for all insurance, 1885 to 1901.
Dues of employers	\$13,962,723	\$29,907,868	\$16,539,308	\$508,445,465
Dues of employees	31,126,584		16,539,316	487,147,669
Subsidy of Imperial government			9,006,227	51,049,907
Interest and other income	2,604,130	3,743,936	8,054,310	98,598,044
Total income	47,683,437	33,651,804	50,141,153	1,140,240,085
Expenses for relief	48,595,450	25,735,679	28,058,569	754,017,739
Cost of administration	2,590,837	3,965,983	2,843,641	79,993,721
Total expenditures	46,186,287	29,701,662	31,502,100	834,011,460
Invested funds	44,421,557	47,408,235	239,779,652	308,020,299

EXPENDITURES FOR SICK INSURANCE RELIEF.

Kind of relief.	Total relief granted from 1885 to 1901.	Relief granted in 1901
Physicians' services	\$90,864,234	\$8,937,796
Medicines, supplies, etc.	73,111,000	6,786,863
Sick wages to members	196,966,384	19,317,996
Sick wages to dependents of members	3,362,241	410,381
Confinement relief	6,390,799	622,400
Hospital relief, etc.	52,510,428	5,517,444
Funeral benefits	15,672,374	1,316,344
Miscellaneous relief	6,723,839	646,383
Total	444,561,309	43,568,407
Cost of administration	27,526,099	2,590,837

EXPENDITURES FOR ACCIDENT INSURANCE RELIEF.

Kind of relief.	Total relief granted from 1885 to 1901.	Relief granted in 1902.
Medical treatment.....	\$4,634,201	\$599,778
Relief during "waiting time".....	1,097,965	164,167
Sanatorium relief.....	7,285,377	969,139
Pensions to dependents.....	1,929,412	268,247
Pensions to the injured.....	117,959,764	18,653,490
Settlements to injured native persons.....	395,570	330,339
Settlements to injured foreigners.....	563,961	39,319
Funeral benefits.....	1,235,291	128,876
Pensions to widows, orphans, etc.....	31,219,617	4,422,064
Settlements to widows.....	1,326,904	160,240
Total.....	167,618,065	25,735,679
Cost of administration.....	33,856,369	3,965,963

EXPENDITURES FOR OLD-AGE AND INVALIDITY INSURANCE RELIEF.

Kind of relief.	Total relief granted from 1891 to 1901.	Relief granted in 1902.
Medical treatment.....	\$5,605,657	\$2,151,042
Special relief.....	62,816	64,780
Relief at homes for invalids.....	14,313	17,378
Pensions for invalids.....	65,484,181	18,698,696
Sick wages.....	464,338	431,015
Old-age pensions.....	64,256,133	5,694,733
Return of dues on account of—		
Marriage.....	5,205,287	1,228,349
Accident.....	7,126	7,681
Death.....	1,706,493	451,685
Total.....	142,806,344	28,658,579
Cost of administration.....	18,611,253	2,843,511

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

BLACKLISTING—CONSTRUCTION OF STATUTE—PROCURING DISCHARGE—COMMON LAW LIABILITY—LIBEL—*Wabash Railroad Company v. Young, Supreme Court of Indiana, 69 Northeastern Reporter, page 1003.*—In this case John W. Young obtained a judgment in the circuit court of Miami County against the Wabash Railroad Company on the ground that it had prevented him from obtaining employment and had procured his dismissal from positions secured by him.

Young had been employed by the railway company, but had voluntarily left its service and sought employment elsewhere. Recovery for the alleged injuries was claimed under an act of March 9, 1889 (section 7077, Burns' A. S. 1901), quoted in part below, and also on common-law grounds, sufficiently set forth in the opinion of the court.

The case was before the supreme court on an appeal from a ruling made by the judge of the circuit court as to the sufficiency of the pleading of the plaintiff as a whole and as to the two points referred to.

The contentions of the company were sustained and the judgment of the lower court reversed, as appears from the following extracts from the remarks of Judge Dowling, who delivered the opinion of the court:

The title of the act of March 9, 1889, in force at the time the supposed grievances occurred, was "An act for the protection of discharged employees and to prevent blacklisting." The section of the act relied upon by appellee is as follows: "Sec. 2. If any railway company, or any other company, or partnership, or corporation, in this State, shall authorize or allow any of its, or their, agents, to blacklist any discharged employees, or attempt by word or writing, or any other means whatever to prevent such discharged employee, or any employee who may have voluntarily left said company's service, from obtaining employment with any other person or company, except as provided in section one of this act, such company or copartnership shall be liable in treble damages to such employee so prevented from obtaining employment, to be recovered by him in a civil action."

An act of the legislature can embrace but one subject and matters properly connected therewith, which subject must be expressed in the title. If any subject is embraced in an act which is not expressed in its title, such act is void as to so much thereof as is not expressed in its title. (Section 19, art. 4, Const.) The subject of the act of March 9, 1889, *supra*, is the protection of discharged employees. The prevention of blacklisting of discharged employees was a matter properly connected with this subject. But the subject of the protection of discharged employees does not include the protection of employees who have not been discharged, or who voluntarily quit the service of their employer. Nor is the protection of employees who voluntarily quit their employment matter properly connected with the subject of the protection of discharged employees. Every section of the act refers to employees who have been discharged, and only in the second section is any provision found which relates to employees who have voluntarily left the service of an employer. This single provision is the prohibition of any attempt, by word, writing, or other means, to prevent a discharged employee, or any employee who may have voluntarily left such service, from obtaining employment with any other person, except as authorized in the first section of the act. So far as the provision just referred to applies to any employee who may have voluntarily left the service of an employer, it is not embraced in the subject of the act as expressed in its title, nor is it properly connected therewith. The protection of discharged employees was a proper and complete subject for an act of the legislature. But, under that title, provisions for the protection of employees who had not been discharged could not be included without a violation of section 19, art. 4, of the constitution. The blacklisting prohibited by section 2 of the act is expressly confined to discharged employees. The complaint does not allege that the appellee was a discharged employee of the appellant, but, on the contrary, it avers that he voluntarily left the service of the company. Therefore, he does not come within the purview and protection of the statute, and his action can not be maintained under its provisions. (*Indianapolis, etc., Co. v. Foreman* (No. 20,253, at present term) 69 N. E. 669.)

The question remains whether the complaint is good under the rule of the common law in such cases, either as charging the appellant with libel or with a wrongful interference with appellee's occupation. The material facts alleged against the appellant in the first paragraph of the complaint are that, shortly after the appellee voluntarily left its employment, the railroad company, by its agents, falsely accused him of being a "labor agitator," and that by letters, words, and influence the appellant caused the discharge of the appellee after he had obtained employment, and by the same means prevented him from obtaining employment. A further and more specific charge is made that the appellant prevented the appellee from being employed by the Atchison, Topeka & Santa Fé Railroad Company, at Denver, Colo., in November, 1894, by representing and stating to that company that the appellee was a "labor agitator," and unfit for said company to have in its employment, and that he was connected with the Order of Railroad Telegraphers of North America. The second paragraph of the complaint in the original action states substantially the same facts as the first, although with a little more particularity. It alleges that the appellee was a member of the Order of Railroad Telegraphers of North America, and that he assisted in the further organization of that asso-

ciation after he left the service of the appellant, by receiving into that order a large number of telegraphers employed by the appellant and by other railroad companies. This paragraph contains the further allegation that in August, 1894, appellee applied to the officers of the Denver & Rio Grande Railroad Company for employment on said railroad, and that his application was accepted, subject to reference to the appellant; that the appellant, by its agent, wrote to the officers of the Denver & Rio Grande Railroad Company a letter containing the words following: "If you want a man who is strictly a labor agitator, this is your man" (meaning the appellee); that by reason of this false statement the appellee was refused said employment.

It appears that no act was done by the appellant through its agents except to inform the officers of the Atchison, Topeka & Santa Fé Railroad Company and the Denver & Rio Grande Railroad Company that the appellee was a member of a labor organization, and that he was a labor agitator. It is not alleged that a charge of this nature was calculated to injure the appellee, or that any odium attached to members of such orders or to labor agitators. The charge was not libelous per se, and no connection is shown between the statements alleged to have been made by appellant's agents, and the failure of the appellee to obtain employment or his loss of any position. Besides, while the complaint avers that the statements alleged to have been made by the appellant were false, by other averments of each paragraph of the pleading it is admitted that the appellee was, in fact, a member of a labor organization, and that he did actively engage in organizing such an association, and in receiving into it the telegraphers employed on appellant's railroad and on other railroads. Just what constitutes a labor agitator does not appear. Ordinarily, the term would justly apply to one actively engaged in promoting the interests of laboring men. It does not imply the use of unlawful or improper means. For all that is shown in the complaint, the statement made by the appellant's agents concerning the appellee was true, and, if true, it could not render the appellant liable. It is also shown by the complaint that the information given to the officers of the Denver & Rio Grande Railroad Company was not volunteered by the appellant, but was given in answer to an inquiry made by the last-named company. The complaint does not describe and allege such a malicious interference by the appellant with the business of the appellee as created a liability at common law.

EIGHT-HOUR LAW—MINES AND SMELTERS—CONSTITUTIONALITY OF STATUTE—*In re Boyce, Supreme Court of Nevada, 75 Pacific Reporter, page 1.* This was a hearing on the application of William G. Boyce for a writ of habeas corpus following his conviction for a violation of the act of February 23, 1903, of the Nevada legislature, limiting the period of employment in underground mines and in smelters to a term of eight hours per day except in cases of emergency where life or property is in imminent danger. The decision turned on the constitutionality of the statute and was discussed at length, the opinion of the court being in favor of upholding the statute, Chief Justice Belknap

dissenting. The syllabus by the court presents the conclusions of law and is as follows:

1. The act of February 23, 1903 (St. 1903, p. 33, c. 10), providing an eight-hour day for all workmen in mines, smelters, and mills for the reduction of ores, is not void, under section 1 of article 1 of our State constitution, guarantying to citizens the right to acquire and possess property; nor is the statute in conflict with section 21 of article 4, which provides that, in all cases where a general law can be made applicable, all laws must be general and of uniform operation throughout the State.

2. Nor is the act mentioned inimical to the fourteenth amendment to the Federal Constitution, which provides that "no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life or liberty or property without due process of law; nor deny to any person within its jurisdiction the equal protection of the law."

3. The people, and through them the legislature, have supreme power in all matters of government where not prohibited by constitutional limitations; and, while the powers of the Federal Government are restricted to those delegated, those of the State government embrace all that are not forbidden.

4. All acts of the legislature are presumed to be valid until it is clearly shown that they violate some constitutional restriction.

5. The legislature has inherent authority, under the general police power of the State, to enact laws for the promotion of the health, safety, and welfare of the people, and its arm can not be stayed when exercised for these purposes.

6. If the restriction of the hours of labor be deemed a regulation or limitation on the right to acquire property, the occupations to which the act applies are not considered healthful; and it was therefore within the power and discretion of the legislature to enact the statute for the protection of the health and prolongation of the lives of the workmen affected, and the resulting welfare of the State.

7. Questions relating to the wisdom, policy, and expediency of statutes are for the people's representatives, and not for the courts.

EIGHT-HOUR LAW—PAY FOR OVERTIME—ARMY REGULATIONS—
United States v. Moses, United States Circuit Court of Appeals, Ninth Circuit, 126 Federal Reporter, page 58.—This was an action arising upon a contract entered into by Chesley C. Moses and the Government of the United States, represented by Maj. G. S. Bingham, chief quartermaster of the Department of Alaska, by which Moses agreed to perform labor as a carpenter in Alaska for the sum of \$5 per working day. His employment continued for a number of months, during a considerable part of which time he worked ten hours per day. In an action to recover pay for the excess over eight hours, which constitute a day's labor under the act of Congress of August 1, 1892, and under article 62, paragraph 812, of the Army Regulations, which is to

the same effect, Moses was awarded a judgment in the district court of the United States for the northern division of the district of Washington. [See Bulletin of the Department of Labor No. 44, p. 163.] From this judgment an appeal was taken by the Government to the circuit court of appeals, and the judgment of the court below was reversed. Judge Morrow, who announced the findings of the circuit court, spoke in part as follows:

Whether the statute is limited in its operation to the United States and the District of Columbia, or whether it extends to the Territories, need not be determined in this case. It may be assumed that it extends to the Territories, and the right of the appellee to maintain his claim may be considered under either the statute or the regulations, and the result will be the same upon the question presented on this appeal. There can be no doubt that it is the duty of the officers of the Government in control of the construction of buildings for the use of the War Department to observe the requirements of the statute and the regulations of that department relating to such work; but it does not follow that a laborer or a mechanic employed by the Government on any of the public works of the United States, performing more than eight hours of service in a calendar day, is entitled to be paid for such extra service in the absence of an agreement to that effect. Prior to the passage of the act of August 1, 1892, Congress had provided an eight-hour law by the act of June 25, 1868 (chapter 72, 15 Stat. 77, Rev. St. 3738 [U. S. Comp. St. 1901, p. 2507]). That statute provides that "eight hours shall constitute a day's work for all laborers, workmen, and mechanics who may be employed by or on behalf of the Government of the United States."

The case of *Timmonds v. United States*, 84 Fed. 933, 28 C. C. A. 570, involved the claim of an employee of the quartermaster's department for compensation for labor performed in excess of eight hours per day. The employment was at a specified salary per month, and the claim was made under the provisions of section 3738 of the Revised Statutes. In all other respects the case was similar to the case at bar. The circuit court of appeals said in that case:

"It is urged that under this provision any laborer, workman, or mechanic who labors in the service of the United States more than eight hours a day may recover as upon a quantum meruit for the value of the extra time so given to the service, irrespective of the contract of employment. This statutory provision has passed under the scrutiny of the Supreme Court in *U. S. v. Martin*, 94 U. S. 400 [24 L. Ed. 128]. It was there ruled that the provision in question is in the nature of a direction by the Government to its agents, and is not a contract between the Government and its servants; that it does not specify what sum shall be paid for the labor of eight hours, nor that the price shall be larger when the hours are more, or smaller when the hours are less; and that, being in the nature of a direction from the Government to its agents, it does not constitute a contract to pay its servants for the excess of time employed. The act, being construed to be merely a direction to the employing officer of the Government, does not furnish grounds of recovery for the supposed excessive service, nor confer any right upon or interest in the servant."

The act of August 1, 1892, differs from the act of June 25, 1868, and

the army regulations in making it a misdemeanor for an officer to require more than eight hours of labor per day except in cases of extraordinary emergency. The army regulations differ from the act of 1868 in providing that labor may be required in excess of eight hours per day in an emergency, and in the further exception that the regulation does not apply to certain laborers and mechanics whose employment is peculiar, and whose service may be necessary at any, or occasionally at all, hours of the day; but these provisions can not, under any possible construction, be held to provide for compensation for services rendered in excess of eight hours per calendar day. If the petitioner in this case is entitled to be paid for excess of day labor under the act of August 1, 1892 (assuming that that act extends to the Territory of Alaska), he is entitled to it by reason of the restriction of labor on public works to eight hours per day, and not because of the penal provisions of the act directed against officers and contractors to prevent such excess of labor being required. If the petitioner was required by the officer in charge of the work to perform more labor each day during a part of his term of employment than the law allowed, then the officer is an offender, unless there was an emergency, as claimed by the Government; but that fact does not fix the wages of the petitioner, or establish an agreement, either express or implied, when one did not exist before. That no such agreement existed is clearly established by the petitioner's own testimony.

We are of the opinion that, upon the agreement entered into by the petitioner with the chief quartermaster, the petitioner is not entitled to recover compensation for the labor performed by him in excess of eight hours on each calendar day.

The judgment and decree of the court below is reversed, with instructions to enter a judgment in favor of the defendant.

DECISIONS UNDER COMMON LAW.

BOYCOTTING—INJUNCTION—STRIKES—*Gray et al. v. Building Trades Council et al.*, *Supreme Court of Minnesota*, 97 *Northwestern Reporter*, page 663.—This was a case in which an injunction had been granted against the Building Trades Council of Minneapolis by the district court of Hennepin County forbidding the Building Trades Council and others to interfere with the business of the complainants. Six separate actions were brought at the same time by different complainants against the same organization, the circumstances being much the same in all the cases. The complainants were employers engaged in the business of installing wires and other electrical apparatus in buildings and doing other such work as was incidental thereto. They had formed an association among themselves agreeing, among other things, not to discriminate in the employment of workmen on the grounds of their membership or nonmembership in any labor union. There was no controversy between them and the trades council as to any question except that of the employment of nonunion labor. The members of the trades council had declared this employers' association unfair, and had interfered with the carrying out of some of their contracts and

with the securing of others by threatening the customers of the contractors that if they attempted to do business with the complainants they would prevent the completion of the buildings on which such nonunion labor was employed. On the appeal to the supreme court this court examined the evidence on which the temporary injunction was granted only far enough to determine whether the affidavits fairly tended to support the claims made in the complaints. The injunction granted by the district court was modified in some respects and as modified was affirmed.

Judge Brown, speaking for the supreme court, discussed at some length the principles controlling the use of injunctions in connection with strikes and boycotts, concluding as follows:

It follows from what has been said that the learned trial court was justified in holding that defendants were guilty of a boycott, and ordering the issuance of a temporary injunction restraining them therefrom.

We come, then, to the question whether the contention of defendants, to the effect that the order of the trial court is too broad and restrains acts other than of boycotting, is well taken. The order of the court is as follows:

"Said injunction shall specifically enjoin said defendants and each of them, their members, agents, and employees, from in any manner interfering with the business of plaintiffs by means of threats or intimidation, of any kind or nature, directed against the customers or prospective customers of said plaintiffs.

"Said injunction shall specifically enjoin the said defendant council and brotherhood, their members, agents, and employees, and each and every one of them, from interfering with the customers or prospective customers of plaintiffs by threats of any kind or nature, and particularly from notifying such customers or prospective customers and patrons of plaintiffs that plaintiffs are unfair.

"Said injunction shall specifically enjoin said defendant council and brotherhood, their members, agents, representatives, and employees, and each and every one of them, from going upon the premises where plaintiffs are engaged or employed, for the purpose of interfering with the business of plaintiffs, and pursuant to said purpose, from ordering and directing or notifying men belonging to the various allied unions to desist from work upon said premises by reason of the fact that plaintiffs are employed thereon."

As already stated, it was proper for the trial court to enjoin defendants from all acts amounting to a boycott, and the question presented is whether the order of the trial court goes beyond this in scope and effect. The first subdivision of the order restrains and enjoins defendants, their members and agents, from in any manner interfering with the business of plaintiffs by means of threats or intimidation, of any kind, directed against their customers or prospective customers. The second subdivision enjoins them from interfering with the customers, or prospective customers, of plaintiffs, by threats of any kind or nature, *"and particularly from notifying such customers or prospective customers that plaintiffs are unfair."* We are of opinion that neither of these restraining clauses **a** part we have italicized, goes beyond or restrains

defendants from acts other than boycotting, and were therefore proper. It is immaterial whether contract relations actually existed between plaintiffs and their customers at the time, for it would be just as injurious and destructive to plaintiffs' business to prevent them by such means from obtaining customers with whom they could enter into contracts as to interfere by unlawful threats or intimidation and cause existing contract relations to be broken. It is plaintiffs' business as a whole that the law protects, and not some particular transaction involved therein. If a notification to such customers, actual or prospective, that plaintiffs are "unfair," portends injury to them or plaintiffs, and such as to bring the case within the rule against boycotting, it was properly made a part of the temporary injunction. (*Beck v. Ry. Teamsters, etc.* (Mich.) 77 N. W. 13, 42 L. R. A. 407, 74 Am. St. Rep. 421.) Whether such a notification would in any case amount to a threat or intimidation must be determined from all the facts and circumstances of each particular case. Such notice might have special significance in a particular case, and have no meaning in another. But the complaints before us, by which we are controlled in determining the case, there being no finding other than in effect that their allegations are true, contain no allegations that the mere notification of customers that plaintiffs are "unfair" has any special significance, that it portended injury, or was intended as a threat or intimidation, and for this reason we hold that the court below was not justified in making this an element of the injunctive order. In other respects the provisions of the order must be taken to cover and include acts constituting an unlawful conspiracy or boycott—nothing further—and are not open to the objections urged against them by defendants. As to the third subdivision, we are of opinion that the acts there attempted to be restrained are such as might lawfully be committed, and are not subject to equitable control. It is fair to the trial judge to say, however, in this connection, that the order was drawn by plaintiffs' attorney, as is usual in such cases, and was undoubtedly adopted by him as covering only the case made by the complaints. But it goes beyond this, and restrains acts other than acts constituting boycotting. This particular provision specifically enjoins defendants, their members, agents, and representatives, from going upon the premises where plaintiffs are employed, for the purpose of ordering, directing or notifying men belonging to the various allied unions to desist from work upon the premises by reason of the fact that plaintiffs are employed thereon.

The authorities, as already noted, very generally hold that a strike is not unlawful, that members of labor unions may singly or in a body quit the service of their employer, and for the purpose of strengthening their association may persuade and induce others in the same occupation to join their union, and, as a means to that end, refuse to allow their members to work in places where nonunion labor is employed (18 Am. & Eng. Ency. Law (2d Ed.) 84.) They may refuse to have any sort of dealings with an employer of nonunion labor, singly or collectively; they may persuade and induce their members to join them, and there would seem to be no reason why they should be limited as to the place where they may do such acts. There would be nothing wrongful or unlawful in their going upon the premises of the owner, with his permission, where their associates were engaged at work, for the purpose of notifying or ordering them to desist from

work thereon, unless, perhaps, their conduct in that respect be so persistent and annoying to the owner of the premises or contractor as to constitute a nuisance. It is clear, upon authority, that this particular part of the injunctional order goes beyond the limits of the law, and can not be sustained.

It is therefore ordered that the order appealed from be modified to conform to the views herein expressed, and, as so modified, it is affirmed.

CONSPIRACY—BOYCOTT BY MEMBERS OF ASSOCIATION—COERCION—FINES.—*Martell v. White et al.*, *Supreme Judicial Court of Massachusetts*, 69 *Northeastern Reporter*, page 1085.—In this case one Martell brought an action in the superior court of Norfolk County for damages arising from an alleged conspiracy by the defendants to injure his trade. Martell was engaged in the business of quarrying granite up to the beginning of the year 1899, when his customers left him and refused further to patronize him, through the action of the defendants and their associates. The defendants were all members of a voluntary association known as the Granite Manufacturers' Association of Quincy, Mass. This association had no constitution and no avowed object of existence, but its by-laws prescribed conditions of membership, and provided that "For the purpose of defraying in part the expense of the maintenance of this organization, any member thereof having business transactions with any party or concern in Quincy or its vicinity, not members hereof, and in any way relating to the cutting, quarrying, polishing, buying, or selling of granite (hand polishers excepted), shall for each of said transactions contribute at least \$1 and not more than \$500. The amount to be fixed by the association upon its determining the amount and nature of said transaction."

Members of this association had dealt with Martell, and contributions ranging in amount from \$10 to \$100 had been assessed, one levy of \$100 having been paid. After these proceedings the members generally refused to deal with Martell, for the reason, as understood, that they wished to avoid the penalty therefor.

The case was not allowed to go to the jury in the circuit court, a verdict for the defendants being ordered, and it was from this order that Martell appealed. The appeal resulted in a reversal of the order of the court below, and a declaration by the supreme judicial court that the case should have gone to the jury.

The reasons for this decision appear in the following quotations from the remarks of Judge Hammond, who delivered the opinion of the court:

The jury might properly have found that the euphemistic expression, "shall contribute to the funds of the association," contained an idea which could be more tersely and accurately expressed by the phrase "shall pay a fine," or, in other words, that the plain intent of the sec-

tion was to provide for the imposition upon those who came within its provisions of a penalty in the nature of a substantial fine. The bill of exceptions recites that "there was no evidence of threats or intimidation practiced upon the plaintiff himself, and the acts complained of were confined to the action of the society upon its own members." We understand this statement to mean simply that the acts of the association concerned only such of the plaintiff's customers as were members, and that no pressure was brought to bear upon the plaintiff, except such as fairly resulted from action upon his customers. While it is true that the by-law was not directed expressly against the plaintiff by name, still he belonged to the class whose business it was intended to affect, and the proceedings actually taken were based upon transactions with him alone, and in that way were directed against his business alone. It was the intention of the defendants to withdraw his customers from him, if possible, by the imposition of fines upon them, with the knowledge that the result would be a great loss to the plaintiff. The defendants must be presumed to have intended the natural result of their acts. Here, then, is a clear and deliberate interference with the business of a person, with the intention of causing damage to him, and ending in that result. The defendants combined and conspired together to ruin the plaintiff in his business, and they accomplished their purpose. In all this, have they kept within lawful bounds? It is elemental that the unlawfulness of a conspiracy may be found either in the end sought, or the means to be used. If either is unlawful, within the meaning of the term as applied to the subject, then the conspiracy is unlawful. It becomes necessary, therefore, to examine into the nature of the conspiracy in this case, both as to the object sought and the means used.

The defendants contend that, both as to object and means, they are justified by the law applicable to business competition.

While the purpose to injure the plaintiff appears clearly enough, the object or motive is left somewhat obscure, upon the evidence. The association had no written constitution, and the by-laws do not expressly set forth its objects. The oral testimony tends to show that one object of the association is to see that agreements made between its members and their employees, and between this association and similar associations in the same line of business, be kept and "lived up to." Whether this failure to set out fully in writing the objects, is due to any reluctance to have them clearly appear, or to some other cause, is, of course, not material to this case. The result, however, is that its objects do not so clearly appear as might be desired; but, in view of the conclusion to which we have come as to the means used, it is not necessary to inquire more closely as to the objects. It may be assumed that one of the objects was to enable the members to compete more successfully with others in the same business, and that the acts of which the plaintiff complains were done for the ultimate protection and advancement of their own business interests, with no intention or desire to injure the plaintiff, except so far as such injury was the necessary result of measures taken for their own interests. If that was true, then, so far as respects the end sought, the conspiracy does not seem to have been illegal.

The next question is whether there is anything unlawful or wrongful in the means used, as applied to the acts in question. The right of competition rests upon the doctrine that the interests of the great

public are best subserved by permitting the general and natural laws of business to have their full and free operation, and that this end is best attained when the trader is allowed, in his business, to make free use of these laws. The weapons used by the trader who relies upon this right for justification must be those furnished by the laws of trade, or at least must not be inconsistent with their free operation. No man can justify an interference with another man's business through fraud or misrepresentation, nor by intimidation, obstruction, or molestation. In the case before us the members of the association were to be held to the policy of refusing to trade with the plaintiff by the imposition of heavy fines, or, in other words, they were coerced by actual or threatened injury to their property. It is true that one may leave the association if he desires, but, if he stays in it, he is subjected to the coercive effect of a fine, to be determined and enforced by the majority. This method of procedure is arbitrary and artificial, and is based in no respect upon the grounds upon which competition in business is permitted, but, on the contrary, it creates a motive for business action inconsistent with that freedom of choice out of which springs the benefit of competition to the public, and has no natural or logical relation to the grounds upon which the right to compete is based. Such a method of influencing a person may be coercive and illegal. (*Carew v. Rutherford*, 106 Mass. 1, 8 Am. Rep. 287.)

Nor is the nature of the coercion changed by the fact that the persons fined were members of the association. The words of Munson, J., in *Boutwell v. Marr*, 71 Vt. 1, 42 Atl. 607 [see *Bulletin of the Department of Labor* No. 39, p. 502], are applicable here: "The law can not be compelled, by any initial agreement of an associate member, to treat him as one having no choice but that of the majority, nor as a willing participant in whatever action may be taken. The voluntary acceptance of by-laws providing for the imposition of coercive fines does not make them legal and collectible, and the standing threat of their imposition may properly be classed with the ordinary threat of suits upon groundless claims. The fact that the relations and processes deemed essential to a recovery are brought within the membership and proceedings of an organized body can not change the result. The law sees in the membership of an association of this character both the authors of its coercive system and the victim of its unlawful pressure. If this were not so, men could deprive their fellows of established rights, and evade the duty of compensation, simply by working through an association."

In view of the considerations upon which the right of competition is based, we are of opinion that, as against the plaintiff, the defendants have failed to show that the coercion or intimidation of the plaintiff's customers by means of a fine is justified by the law of competition. The ground of the justification is not broad enough to cover the acts of interference in their entirety, and the interference, being injurious and unjustifiable, is unlawful. We do not mean to be understood as saying that a fine is of itself necessarily, or even generally, an illegal implement. In many cases it is so slight as not to be coercive in its nature; in many, it serves a useful purpose to call the attention of a member of an organization to the fact of the infraction of some innocent regulation; and, in many it serves as an extra incentive to the performance of some absolute duty or the assertion of some absolute right. But where, as in the case before us, the fine is so

large as to amount to moral intimidation or coercion, and is used as a means to enforce a right not absolute in its nature, but conditional, and is inconsistent with those conditions upon which the right rests, then the coercion becomes unjustifiable, and taints with illegality the act.

LABOR ORGANIZATIONS—CONTRACT FOR EXCLUSIVE EMPLOYMENT OF UNION LABOR—INJUNCTION—PICKETING—*Christensen et al. v. People, Illinois Appellate Court, First District, Official Report.*—This case was before the appellate court on appeal from a judgment rendered in the superior court of Cook County against Christensen and others, found guilty of contempt in violating an injunction issued at the instance of the Kellogg Switchboard and Supply Company, of Chicago. The petition of the company made a number of labor unions and their officers defendants, charging malicious interference with the business of the company by the maintenance of a strike and by preventing the continued employment of former employees and the hiring of others desiring employment. About May 7, 1903, business agents of the labor unions involved had presented drafts of agreements, fixing the terms of employment by the switchboard company, a condition of which was that only members of labor unions should be employed. This agreement the company refused to sign, whereupon the strike was immediately instituted, and, as declared in the affidavits of the company, numerous acts of violence were committed, picketing was maintained, and the company was rendered unable to complete its contracts or otherwise to carry on its business. The injunction was allowed on May 25, by which the defendant unions and their officers named, as well as their confederates, servants, and agents, were, among other things, restrained from in any manner interfering with, obstructing, or stopping any of the business of the company, or entering the grounds or places where the employees of the company were at work for the purpose of such interference or obstruction, and also from the use of threats, intimidation, force, or violence toward the employees or toward those who might desire to continue in or enter the service or employment of the company. Copies of the injunction were posted in and about the company's place of business and notice and information of the same were given as widely as possible among the present and former employees and other persons in the neighborhood, personal service being given in a number of instances. Subsequently, on June 15, as the result of hearings before the court, certain defendants, appellants in the present case, were found guilty of contempt in violating the injunction and fined. A week later similar proceedings were had and additional fines for contempt were assessed and in a later action penalties of fine and, in two instances, of imprisonment were levied on persons found guilty of violation of the injunction. From these judgments the present appeal was taken. At the

various hearings knowledge of the injunction was in general admitted, the defense being that the acts done by the appellants were simply acts of advice and persuasion and that no violence was committed by them or with their knowledge or approval. Evidence showed, however, that repeated assaults had been made and that many persons, both actual and prospective employees, had been intimidated. The purpose of the strike as set forth by a number of the appellants was to procure the signing of the agreement as to the exclusive employment of union labor above referred to.

The various points raised at the hearing were discussed at length by Judge Adams, who delivered the opinion of the court. The following extracts from his opinion show the grounds on which he supported the judgment of the court below and also his ruling as to the legality of the form of contract demanded by the labor unions:

It is contended that the contempts are criminal, and, therefore, appellants should have been discharged on their answers. The relief sought is a permanent injunction, and preliminary thereto a temporary one of the same character as the permanent one prayed. Manifestly the preliminary injunction is for the benefit of the complainant and, therefore, its enforcement is for its benefit.

The injunction and its enforcement being for the complainant's benefit, the proceedings must be regarded as civil.

It is practically impossible, without extending this opinion beyond all reasonable bounds, to refer to all of the affidavits in support of the petition of June 22nd. They are very numerous and it clearly appears from them that a large number of the former employees of complainant picketed and patrolled in the immediate neighborhood of complainant's factory, and in the approaches thereto, and endeavored, sometimes by warnings, sometimes by threats, and, in a number of times, by actual assault and beatings and the use of opprobrious epithets, to deter complainant's employees from remaining in its employ, and to prevent others seeking employment with it from entering its employ, by means of which constant fear of bodily injury was engendered in the minds of such persons.

The appellants deny that they personally used force, threats or intimidation of any sort, and say that they were very peaceable and mildly persuasive. But the very presence of a large number of pickets, with the avowed purpose of preventing complainant's employees from remaining in its employ, and those seeking employment with it to desist therefrom, was itself intimidation. In *Farmer's Loan & Trust Co. v. N. Pac. R. R. Co.*, 60 Fed. R., 803, 820, Mr. Justice Jenkins quotes the following remarks of Mr. Justice Brewer on the subject: "The common rule as to strikes is this: Not merely do the employees quit the employment, and thus handicap the employer in the use of his property, and perhaps in the discharge of duties which he owes to the public, but they also forcibly prevent others from taking their places. It is useless to say that they only advise; no man is misled. When a thousand laborers gather around a railroad track and say to those who seek employment that they had better not; and when that advice is supplemented every little while by a terrible assault on one who disregards it, every one knows that something more than advice

is intended. It is coercion, force; it is the effort of the many, by the mere weight of numbers, to compel the one to do their bidding."

That the purpose of the strike was to compel the execution of the drafts of agreement is clear. It is averred in the sworn bill and deposed to in the affidavits of De Wolf, complainant's president, Kellogg, its secretary, and treasurer, and Edwards, its superintendent, that business agents of the different unions called on complainant, and insisted on its executing the agreements, and that, when complainant's president refused, on the ground that the proposed agreements were unreasonable, it was threatened by one of said business agents that, unless complainant would sign the agreements, a strike would be called, and that said business agents called a strike, in response to which about 500 of complainant's employees quit its employ. Appellants' counsel admit in their brief, "the purpose of the strike is to bring about the execution of the contracts," and at least three of appellants so admit in their answers. It is unlawful to compel one to execute any contract. A contract executed under duress is voidable, and duress is present where a party "is constrained, under circumstances which deprive him of the exercise of free will, to agree to or to perform the act sought to be avoided." (10 Am. & Eng. Ency., 2nd ed., p. 321.) "Duress per minas exists when a person is induced to perform an act to avoid a threatened and impending calamity." (Ib. 324.) Especially was the purpose to compel complainant to execute the agreements in question an unlawful purpose. Article I strikes at the right of contract, and provides that complainant shall employ none but members of the several unions, thus discriminating in favor of one class of men and excluding all others.

The agreements in question would, if executed, tend to create a monopoly in favor of the members of the different unions, to the exclusion of workmen not members of such unions, and are, in this respect, unlawful. Contracts tending to create a monopoly are void. [Cases cited.]

Not only was the purpose of the strike unlawful, but the means used to achieve the unlawful purpose were unlawful. The means used were the acts heretofore mentioned, and thereby injury to the complainant's business. The appellants and their associates intended to stop the business of the complainant so far as they possibly could, and the evidence shows that they did stop it in great part, to complainant's injury. The following is contained in the brief of appellants' counsel, which we quote as illustrative of their view of the cause. "How do picketing, patrolling, persuading, or even slugging affect property rights, except in the most fantastic sense? Injury to business has no independent existence whatever, because business has no tangible existence to be injured, in the true and unperverted sense."

In *Union Pac. Ry. Co. v. Ruef*, 120 Fed. R., 102, 113, the court say: "And that one's business is his or its property is likewise elementary, and is conceded by all. And that liberty means the right to do as he pleases, when he interferes with the rights of no other person, and the right to make contracts with all persons upon all subjects-matter, save and excepting with reference to immoral or unlawful matters, is also conceded by all who know anything of the propositions."

It is an indispensable condition of the enjoyment by each citizen of the liberty and rights guaranteed by the constitution and laws, that he shall respect and not unlawfully infringe upon the liberty or rights of any other citizen. This can not be done with impunity.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1896.

[The Second Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1896. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

MONTANA.

ACTS OF 1903.

CHAPTER 45.—*Employment of children.*

SECTION 1. Section 1920 of the Political Code [shall] be amended to read as follows:

Section 1920. * * * Every parent, guardian or other person having charge of any child between the ages of eight and fourteen years shall send such child to a public, private, or parochial school, for the full time that the school attended is in session, which shall in no case be for less than sixteen weeks during any current year, and said attendance shall begin within the first week of the school term, unless the child is excused from such attendance * * *, upon satisfactory showing, either that the bodily or mental condition of the child does not permit of its attendance at school, or that the child is being instructed at home by a person qualified, * * * or that there is no school taught the required length of time within 2½ miles of the residence of such child by the nearest traveled road: *Provided*, That no child shall be refused admission to any public school on account of race or color. * * *

Sec. 2. Section 1921 [shall] be amended to read as follows:

Section 1921. No child under fourteen years of age shall be employed or be in the employment of any person, company or corporation during the school term and while the public schools are in session, unless such child shall present to such person, company or corporation an age and schooling certificate herein provided for. An age and schooling certificate shall be approved only by the superintendent of schools, or by a person authorized by him, in city or other districts having such superintendent, or by the clerk of the board of trustees in village and township districts not having such superintendent, upon a satisfactory proof of the age of such minor and that he has successfully completed the studies enumerated in section 1920 of this article; or if between the ages of fourteen and sixteen years, a knowledge of his or her ability to read and write legibly the English language. The age and schooling certificate shall be formulated by the superintendent of public instruction and the same furnished, in blank, by the clerk of the board of trustees or the clerk of the district. Every person [.] company, or corporation employing any child under sixteen years of age, shall exact the age and schooling certificate prescribed in this section, as a condition of employment and shall keep the same on file, and shall upon the request of the truant officer hereinafter provided for, permit him to examine such age and schooling certificate. Any person, company, or corporation, employing any minor contrary to the provisions of this section shall be fined not less than twenty-five nor more than fifty dollars for each and every offense.

Sec. 3. Section 1922 [shall] be amended to read as follows:

Section 1922. All minors over the age of fourteen and under the age of sixteen years, who can not read and write the English language shall be required to attend school as provided in section 1920, of this article and all the provisions of said section shall apply to said minors: *Provided*, That such attendance shall not be required of such minors after they have secured a certificate from the superintendent of schools in districts having superintendents, or the clerk of the board of trustees in districts not having superintendents, that they can read, and write the English language. No person, company or corporation shall employ any such minor during the time schools are in session, or having such minor in their employ shall immediately cease

such employment, upon notice from the truant officer who is hereinafter provided. Every person, company, or corporation violating the provisions of this section shall be fined not less than twenty-five nor more than fifty dollars for each and every offense.

SEC. 5. Section 1924 [shall] be amended to read as follows:

Section 1924. * * * The truant officer shall be vested with police powers, the authority to serve warrants, and have authority to enter workshops, factories, stores and all other places where children may be employed, and do whatever may be necessary, in the way of investigation or otherwise to enforce the provisions of this act; * * *

Approved March 3d, 1903.

CHAPTER 53.—*Hours of labor of hoisting engineers at mines.*

SECTION 1. It shall be unlawful for any person or persons, company or corporation, to operate or handle, or to induce, persuade or prevail upon any person or persons to operate or handle for more than eight hours in twenty-four hours of each day, any hoisting engine at or in any mine.

This act shall apply only to such plants as are in continuous operation or are operated sixteen or more hours in twenty-four hours of each day, or at or in any mine where said hoisting engine develops fifteen or more horse power, or at or in any mine wherein there are fifteen or more men employed underground in twenty-four hours of each day: *Provided however*, That the provisions of this act shall not apply to any person or persons operating any hoisting engine more than eight hours in each twenty-four hours for the purpose of relieving another employee in case of sickness or other unforeseen cause or causes.

SEC. 2. Any person or persons, company or corporation, who shall violate any of the provisions of this act, shall, upon conviction, be punished by a fine of not less than ten (\$10) dollars, nor more than one hundred (\$100) dollars; and each and every day that such person or persons, company or corporation may continue to violate any of the provisions of this act, shall be considered a separate and distinct offense and shall be punishable as such.

Approved March 3, 1903.

CHAPTER 60.—*Mine regulations—Safety cages.*

SECTION 1.—Section 705 of Title X of the Penal Code * * * as amended by House Bill No. 77, of the Laws of the Fifth Legislative Assembly, is hereby amended, so as to read as follows:

Section 705. It is unlawful for any corporation or person to sink or work, through any vertical shaft where mining cages are used, to a greater depth than three hundred feet, unless said shaft shall be provided with an iron-bonneted safety cage, to be used in the lowering and hoisting of the employees thereof, said cage to be also provided with sheet iron or steel casing not less than one-eighth [one-eighth] inch in diameter [thickness]; doors to be made of the same material shall be hung on hinges or may be made to slide and shall not be less than five feet high from the bottom of the cage, and said doors must be closed when lowering or hoisting the men: *Provided*, That when such cage is used for sinking only, it need not be equipped with such doors as are hereinbefore provided for. The safety apparatus, whether consisting of eccentrics, springs or other device, must be securely fastened to the cage, and must be of sufficient strength to hold the cage loaded at any depth to which the shaft may be sunk. The iron bonnet of the aforesaid cage must be made of boiler sheet iron, of good quality, of at least three-sixteenths of an inch in thickness, and must cover the top of such cage in such manner as to afford the greatest protection to life and limb from anything falling down said shaft. It shall be the duty of the mining inspector and his assistant to see that all cages are kept in compliance with this section and to also see that the safety dogs are kept in good order.

Every person or corporation failing to comply with any of the provisions of this section is punishable by a fine of not less than three hundred dollars, nor more than one thousand dollars.

Approved March 4, 1903.

CHAPTER 80.—*Employment of labor—Fraudulent representations, etc.*

SECTION 1. It shall be unlawful for any person or persons, society, company, association, corporation, or organization of any kind, doing business in this State, to

induce, influence, persuade or engage workmen to change from one place to another in this State, through or by means of deception, misrepresentation and false advertising concerning the kind or character of the work, or the sanitary or other conditions of employment, or as to the existence of a strike or other trouble pending between the employer and the employee, at the time of, or immediately prior to such engagement. Failure to state in any advertisement, proposal or contract for the employment of workmen that there is a strike, lockout, or other labor trouble at the place of the proposed employment, when in fact such strike, lockout or other trouble then actually exists at such place, shall be deemed a false advertisement and misrepresentation for the purpose of this act.

SEC. 2. Every person, company, corporation, society, association, or organization of any kind, doing business in this State, violating any of the provisions of this act, is punishable by a fine of not less than one hundred (\$100) dollars, not [nor] more than two thousand (\$2,000) dollars.

SEC. 3. Any workman of this State, or any workman of any State, who has been, or shall be, influenced, induced or persuaded to engage with any person mentioned in section 1 of this act, through or by means of any of the things prohibited by this act, shall have a right of action for recovery of all damages that he has sustained in consequence of the deception. Misrepresentation and false advertising used to induce him to change his place of employment, against any person, corporation, company, or association, directly or indirectly procuring such change, and in addition thereto, he shall recover reasonable attorney's fees to be fixed by the court and taxed as costs in any judgment recovered.

Approved March 5, 1903.

CHAPTER 82.—*Mine regulations.*

SECTION 1. It is unlawful for any corporation or person operating any mine in this State worked through a vertical or incline shaft, to stoep within a less distance than twenty-five (25) feet of the said shaft, when other work is being carried on below said stoeping.

SEC. 2. It is unlawful for any person or corporation operating any mine in this State worked through a vertical or incline shaft, where a cage or other device is used for the purpose of hoisting or lowering men to run such cage when men are upon the same at a greater rate of speed than eight hundred (800) feet per minute.

SEC. 3. It is unlawful for any person, company or corporation, to erect or maintain any building, or inclosure used for a blacksmith shop or drying room within a distance of fifty (50) feet of the mouth of any tunnel or shaft, unless the same shall be fireproof in its construction.

SEC. 4. The penalty for violating the provisions of any of the preceding sections is the same as provided in section 705 of the Penal Code: *Provided*, That when it shall appear that any engineer has violated the express order of his employer in running his engine at a greater speed than 800 feet per minute the engineer alone shall be subject to prosecution, and to the fine imposed by the provisions of this act.

Approved March 5, 1903.

CHAPTER 83.—*Liability of employers for injuries to employees.*

SECTION 1. Every railway corporation including electric railway corporations, doing business in this State shall be liable for all damages sustained by an employee thereof, within this State, without contributing negligence on his part, when such damage is caused by the negligence of any train dispatcher, telegraph operator, superintendent, master mechanic, yardmaster, conductor, engineer, motorman, or of any other employee who has superintendence of any stationary or hand signal.

SEC. 2. That every company, corporation, or individual operating any mine, smelter or mill for the refining of ores shall be liable for all damages sustained by an employee thereof within this State, without contributing negligence on his part, when such damage is caused by the negligence of any superintendent, foreman, shift-boss, hoisting or other engineer, or crane-men.

SEC. 3. No contract of insurance, relief, benefit, or indemnity in case of injury or death, nor any other contract entered into either before or after the injury, between the person injured and any of the employers named in this act shall constitute any bar or defense to any cause of action brought under the provisions of this act.

Approved March 5, 1903.

CHAPTER 98.—*Mine regulations—Inspection.*

SECTION 1. Section 582 of the Political Code [shall] be amended so as to read as follows:

Section 582. It is the duty of the inspector of mines by himself or deputy to visit every mine in the State, once every year and inspect its workings, timbering, ventilation, means of ingress and egress, and the means adopted and in use for the preservation of the lives and safety of the miners employed therein. For this purpose the inspector and his deputy at all times shall have access to any mine and all parts thereof. All mine owners, lessees, operators or superintendents, must render such assistance as may be necessary to enable the inspector or his deputy to make the examination.

When upon such inspection any mine or portion thereof is found to be in an unsafe condition, the inspector shall at once serve a notice in writing upon the owner, lessor, lessee, agent, manager or superintendent thereof, setting forth the nature of the defects which render such mine unsafe and the point or place in such mine where such defects exist, and requiring the repairs necessary to remedy such defects to be made within a specified time, and, if in his judgment the circumstances so require, he shall forbid the operation of such mine or portion thereof as has been declared unsafe, save and except for the purpose of making the repairs necessary for the purpose of remedying such defects and making such mine safe for the laborers employed therein.

Sec. 2. Section 583 of the Political Code [shall] be amended so as to read as follows:

Section 583. Whenever the inspector of mines receives a complaint in writing signed by one or more parties setting forth that the mine in which he or they are working is dangerous in any respect, he or the deputy inspector must in person visit and examine such mine. Every complaint must set forth the nature of the danger existing at the mine and the time the cause of such danger was first observed.

Sec. 3. Section 584 of the Political Code [shall] be amended so as to read as follows:

Section 584. After such complaint has been received by the inspector of mines, he must, as soon as possible, visit such mine; and if from such examination he ascertains that the mine is from any cause in a dangerous condition, he must at once notify the owner, lessor or agent thereof, such notice to be in writing, and to be served by copy on such owner, lessor, lessee, or agent, in the same manner as provided by law for the serving of legal process, and the notice must state fully and in detail in what particular manner such mine is dangerous or insecure, and requires [require] all necessary changes to be made without delay, for the purpose of making such mine safe for the laborers employed therein; and in any criminal or civil procedure at law against the party or parties so notified, on account of loss of life or bodily injury sustained by an employee subsequent to such notice and in consequence of a neglect to obey the inspectors' requirements, a certified copy of the notice served by the inspector is prima facie evidence of the gross negligence of the party or parties so complained of. If the owner, lessor, lessee, or agent of any such mine shall neglect or refuse to obey or comply with the instructions of the inspector as contained in such notice, or shall neglect or refuse to cause the repairs necessary to remedy such defects to be made within a reasonable time, or shall refuse to cause work to be stopped when so ordered, such party or parties so refusing may be prosecuted criminally by the inspector.

Sec. 4. Section 585 of the Political Code [shall] be amended so as to read as follows:

Section 585. It is the duty of the inspector of mines, at least once in each year, either in person or by deputy inspector, to visit each mining county in the State and examine as many of the mines in the different counties as practicable, and make such recommendations as in his judgment are necessary to insure the safety of the workmen employed therein; and whenever from his examination, he finds any mine to be in an unsafe condition, he shall at once serve a notice upon the owner, lessor, lessee, or agent [: if the person so notified] fails to comply with such notice, he may prosecute them or any of them as provided in the next preceding section.

Sec. 5. Section 586 of the Political Code [shall] be amended so as to read as follows:

Section 586. Whenever a serious or fatal accident occurs in any mine it is the duty of the person in charge thereof to immediately notify the inspector of mines or the deputy inspector, and upon receiving such notice the inspector in person or the deputy inspector must at once repair to the place of accident, and investigate fully the cause of such accident, and whenever possible to do so, the inspector or deputy inspector shall be present at the coroner's inquest held over the remains of the person or persons killed by such accident, and testify as to the cause thereof, and state whether, in his opinion, the accident was due to the negligence or mismanagement of the owner or person in charge.

If the inspector or deputy inspector can not be immediately present in case of a fatal or serious accident occurring, it is the duty of the owner or person in charge of the mine to have written statements made by those witnessing the same, and duly sworn to. In case no person was present at the time of the accident, then the verified statement of those first present after the accident must be taken, and such statement must be given to the inspector or the deputy inspector.

If after making such investigation the inspector deems the facts warrant it, he may prosecute criminally the owner, lessor, lessee, or agent of the mine in which such accident occurred.

SEC. 6. Section 589 of the Political Code [shall] be amended, so as to read as follows:

Section 589. The provisions of the article do not apply to mines in which less than five men are employed. But all owners, lessors, lessees, agents, or managers operating any metalliferous mine in this State in which five or more men are employed, shall report the same to the inspector of mines, state the name of the mine, the location of the same, the name of the company, person or persons owning or operating the same, post office address and number of men employed.

Approved March 6, 1903.

CHAPTER 102.—*Coercion of employees in choice of boarding houses.*

SECTION 1. It shall be unlawful for any person, firm, company or corporation now operating, or who shall hereafter operate a boarding house in connection with their general business, either directly or through others, to compel an employee to board in such boarding house against his will.

SEC. 2. Any person, firm, company or corporation violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than one hundred dollars.

Approved, March 6, 1903.

CHAPTER 114.—*Hours of labor, etc., on irrigation works.*

SECTION 13. * * * In all contracts let under this act, eight hours shall constitute a day's work, and no Mongolian shall be employed thereon.

Approved, March 7, 1903.

LEADING ARTICLES IN PAST NUMBERS OF THE BULLETIN.

- No. 1. Private and public debt in the United States, by George K. Holmes.
Employer and employee under the common law, by V. H. Olmsted and S. D. Fessenden.
- No. 2. The poor colonies of Holland, by J. Howard Gore, Ph. D.
The industrial revolution in Japan, by William Eleroy Curtis.
Notes concerning the money of the U. S. and other countries, by W. C. Hunt.
The wealth and receipts and expenses of the U. S., by W. M. Steuart.
- No. 3. Industrial communities: Coal Mining Co. of Anzin, by W. F. Willoughby.
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- No. 7. Industrial communities: Various communities, by W. F. Willoughby.
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- No. 8. Conciliation and arbitration in the boot and shoe industry, by T. A. Carroll.
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- No. 9. The padrone system and padrone banks, by John Koren.
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- No. 10. Condition of the Negro in various cities.
Building and loan associations.
- No. 11. Workers at gainful occupations at censuses of 1870, 1880, and 1890, by W. C. Hunt.
Public baths in Europe, by Edward Mussey Hartwell, Ph. D., M. D.
- No. 12. The inspection of factories and workshops in the U. S., by W. F. Willoughby.
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- No. 13. The anthracite mine laborers, by G. O. Virtue, Ph. D.
- No. 14. The Negroes of Farmville, Va.: A social study, by W. E. B. Du Bois, Ph. D.
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- No. 15. Boarding homes and clubs for working women, by Mary S. Fergusson.
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- No. 16. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
- No. 17. Brotherhood relief and insurance of railway employees, by E. R. Johnson, Ph. D.
The nations of Antwerp, by J. Howard Gore, Ph. D.
- No. 18. Wages in the United States and Europe, 1870 to 1898.
- No. 19. Alaskan gold fields and opportunities for capital and labor, by S. C. Dunham.
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- No. 23. Attitude of women's clubs, etc., toward social economics, by Ellen M. Henriotin.
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- No. 24. Statistics of cities.
- No. 25. Foreign labor laws: Great Britain and France, by W. F. Willoughby.
- No. 26. Protection of workmen in their employment, by Stephen D. Fessenden.
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